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CONSUMERS' RESEARCH

Bulletin

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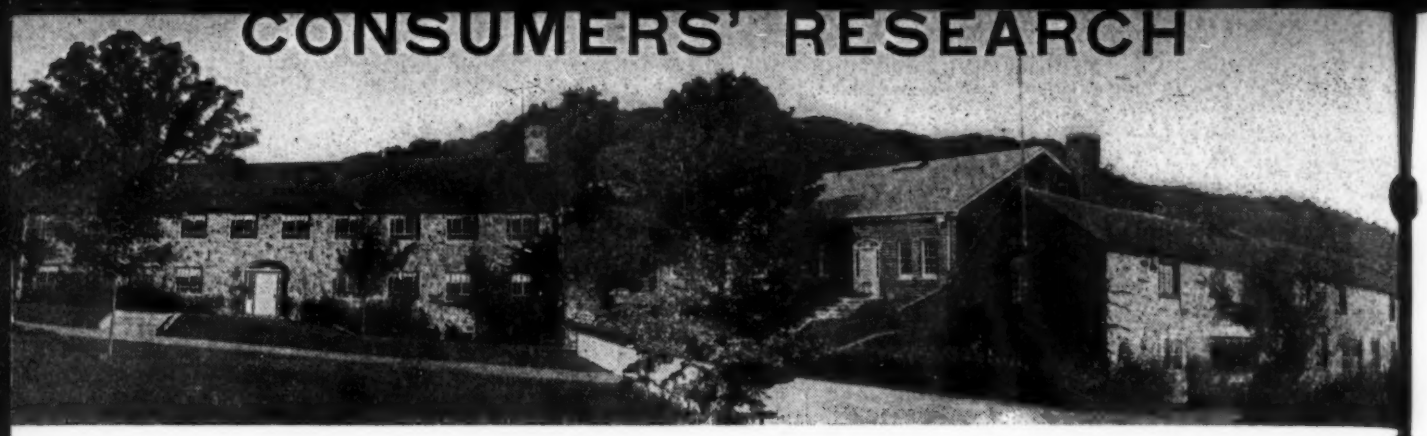

Vol. 17 • No. 2 **BULLETIN** February 1946

Off the Editor's Chest

THE dropping of atomic bombs on two Japanese cities last fall and the extremely active discussion on the radio and in the public press of the long chain of scientific and technical invention and development that preceded this occurrence has had far-reaching effects upon the public mind. Perhaps its major result, other than the wiping out of the target cities, has been stimulation of an enormous degree of interest in the fruits of scientific experiment and research, combined with a perhaps well justified fear of future potentialities in this field of discovery. Such fear is shared by all, not only the scientists themselves, but by the millions of people to whom the term nuclear physics is merely a new phrase without any particular content or meaning.

It is the current vogue to read articles and books and to attend lectures on atomic fission with much the same sort of mental genuflections to the new idea as were accorded in recent memory to Freudian psychology, "progressive education," and the theory of relativity. The abstruse nature of this particular branch of physics, which makes even a dim perception of its significance almost impossible to anyone without long and rigorous scientific training, does not deter hundreds of writers and speakers from holding forth on the probable nature and effect of the smashing of the atom on our present and future lives, and the social and economic order. That such writers have had no training in physical science or, indeed, in many cases, in any of the exact sciences, has not cramped their style in the least in expressing the most positive opinions about this whole question and how it should be dealt with by drastic modification of our social and legal system and of international relationships.

In this land of America, which has been almost alone in maintaining a tradition of free speech and freedom of the press, it is every man's right—within certain broad limitations—to deliver his opinions on any subject he sees fit, and it is not required that any authority pass in advance upon his qualifications to speak or write. There is some danger, however, from all the hocus pocus that presently passes for general enlightenment about neutrons, ionization, and stable and radioactive isotopes, that the non-scientific person will get a wholly false picture of the meaning and power of the work of scientists. It is not impossible for a studious person who is willing to devote himself to many hours of study of the subject, provided he has a fair general knowledge of physics and chemistry, to understand some of the principles involved in the invention and manufacture of the atomic bomb, but much harm is done by the imaginative stories and opinions of radio commentators and popular writers who talk glibly about the harnessing of atomic forces to everyday realities so that we shall shortly have atom-driven electrical power stations, automobiles, and railway locomotives. Such publicity only serves to confuse the matter in the layman's mind and make the whole thing seem like some kind of latter-day magic. An attitude is being fostered that the time is shortly to arrive when human effort will become practically unnecessary, and

(Continued on page 23)

Scientific and Technical Experts and Editors: F. J. Schlink, R. Joyce, M. C. Phillips, A. R. Greenleaf, and Charles L. Bernier. Editorial Assistant: Mary F. Roberts.

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¶*CR will, of course, gladly change addresses for men and women in the services as often as required by changes in station and other circumstances.*

★★★For a brief cumulative index of 1946 BULLETINS preceding this issue, see page 26.

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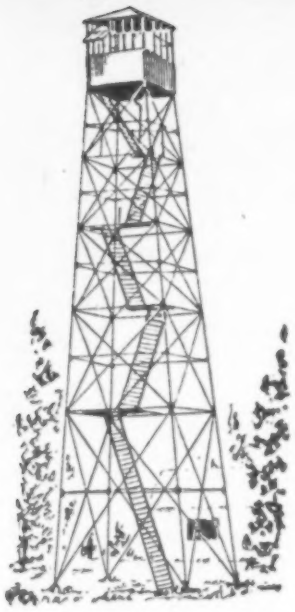


The Consumers' Observation Post

SUN-SEEKING WINTER VACATIONISTS experience many difficulties in reaching their destinations--according to those whose tires on the family car are good enough to risk starting a long trip. It appears that there is a shortage of eating facilities and places to spend the night along the way. One traveler reports that it is essential to make reservations ahead for each stop, if accommodations are to be certainly available. It is necessary, too, to allow longer time for eating than usual, because service is slow, and to spend more money than planned. By the latter half of 1946, transportation is expected to be more plentiful and comfortable, although tires for both old and new cars are still likely to be scarce.

* * *

RADIO SETS that are just beginning to make their appearance were held up because of the slowness of the OPA in setting ceiling prices on finished models in some cases and failure to allow prices on components that would enable manufacturers of parts to operate at a profit. Emerson received permission late last year to sell its new lowest-priced set at $20. Before the war--and the OPA--the company made a set to sell at $9.90. It is reported that some companies are shipping sets abroad to get away from United States price restrictions and that a number of foreign sets are being imported for the same reason.

* * *

NYLON STOCKINGS have proved to have such excellent wearing qualities that some women may get the notion that anything made of nylon will be durable. There are other factors, however, to be taken into consideration. Considerable nylon parachute cloth, for example, has been declared surplus and put on the market, primarily for use as linings in both men's and women's garments. Two government agencies have warned in connection with the sale of the material that the yarn slippage along the warp seams may be excessive, unless the fabric is given a "slippage-resistant" finish. Consumers who are interested in obtaining garments with good wearing qualities will be wise to consult the label or information tag and make their purchases only in cases where nylon fabric has been properly treated.

* * *

PRICES OF NEW 1946 AUTOMOBILES have been set to maintain 1942 ceiling prices, according to official announcement. One shrewd observer, however, points out that turn-in allowances on used cars will be considerably lower than in 1941. He suggests that where a turn-in of $300 was allowed in certain cases, a turn-in of $150 will likely be the corresponding allowance this year--a decided price rise, so far as the consumer is concerned. Dealers report also that the demand for new cars is so great that prospective purchasers are offering $100 above ceiling prices in some cases "to assure prompt delivery."

* * *

LAUNDRY SOAP AND SOAP CHIPS may be expected to be more plentiful. The Army is reported to be almost entirely out of the soap market and has turned back substantial quantities of laundry and toilet soap and soap chips for disposal as surplus.

* * *

FUR COATS have sold in large numbers this winter in spite of the 20 percent war luxury tax. It was expected that thrifty buyers would hesitate to make purchases this year because the tax is supposed to revert to the 10 per-

cent pre-war tax six months after the official declaration of the end of war. There were apparently plenty of fur coat buyers who do not regard thrift as a necessary or desirable virtue.

* * *

BUTTER has been in short supply for some time in most localities. Although the winter months are a time of slack production, the chief obstacle has been discriminatory OPA ceiling prices, which have been an important factor in diverting cream to other products. As one business journal has pointed out, sweet cream, ice cream mix, cheese, and evaporated milk all bring the farmer more money for the butterfat produced on his farm than cream that is sold for making butter. Consumers who want butter will just have to indicate to their Congressmen that they want OPA price controls and related restrictions on their favorite foods and other items eliminated.

* * *

ARMY-NAVY JEEPS and other military vehicles were designed to win a war and not for economy of operation, points out Professor H. B. Walker of the University of California. He advises farmers to be extremely critical of buying such surplus war items, although surplus materials such as canvas, paint, grease, hand tools, electric drills and motors may prove to be good values. It must be kept in mind, however, that surplus commodities can be bought only through established commercial channels. In a circular announcing the disposal of 13 million dollars' worth of surplus boots, shoes, and rubber footwear, it was noted that the minimum quantity that could be purchased by "small retail buyers" of a certain type of shoe was 1008 pairs. It is doubtful that the small shoe merchant will be pleased at the implied compliment to the scope and scale of his merchandising activity.

* * *

CANNED DOG FOOD has been under surveillance of the New Hampshire Department of Health for some time. Many products sold in that state, reports the Health Department, are not vacuum-packed, but are put up in glass jars—many of which are re-used jars--with metal screw caps. Sometimes the tops of the jars have been dipped in paraffin in a vain attempt to prevent spoilage of the contents. The contents of such packs have undergone decomposition in so many cases that the State Health Department is considering the possibility of forbidding their sale. Possibly pet owners in other states should check to see whether they are feeding this sort of stuff to their animals.

* * *

MORE SUGAR is in sight for this year, although it is expected to make its appearance slowly because the needs of Europe are great. There are some, however, who believe that wartime controls will be so thoroughly discredited that sugar rationing will expire after June 30th when the Office of Price Administration should come to an end. In that event the price of sugar will probably reach its supply-and-demand level of around 10c a pound. At the worst of the sugar shortage, New Hampshire reported some misunderstanding about sugar-cane syrups that were in demand as sugar substitutes. Sugar-cane syrups are made in small factories in certain southern states by evaporating the juice of the sugar cane. The resulting product is dark in color and has a slight molasses flavor. The New England housewife, however, expects cane syrup to be clear ("water-white") and in checking up on several complaints about the cane sugar product, New Hampshire's Health Department discovered that, although the dark color was entirely in order, some three thousand containers of Open Kettle Brand Sugar Cane Syrup were misbranded and adulterated under the requirements of the N.H. Food and Drug law.

* * *

DDT INSECTICIDES should be used carefully in food and bakery shops. Connecticut Agricultural Experiment Station experts advise against spraying inside the shop, except on the inside of door and window screens. Furthermore, if care is not taken, the inhalation of the mist may give the person who does the spraying a severe headache. Bakers are strongly urged to use DDT only on flies and to stick to older methods for control of roaches. The DDT powder, it appears, does not kill roaches immediately but "stirs them up" and makes them

(The continuation of this section is on page 29)

Judging the 1946 Cars

★ ★ ★

On the basis of information available early in January, the following comments indicate as closely as possible the merits of the various cars that had been announced up to January 1. As yet no data are available concerning cars made under the Chrysler management; naturally, when these cars are later described and added to the group of cars here considered, they may in some degree affect, in a relative sense, the evaluations given the makes treated in the present article.

In general it may be noted that since many of the changes made in the 1946 cars are based upon wartime service experience with 1941 and 1942 models, all the cars are "better" than previously. There is also no evidence that shortages of any vital *materials* have affected quality even in the first cars produced (other than possibly in fabrics used for upholstery). Conversely, wartime progress has improved most of the materials used. Aluminum is plentiful. Sufficient chromium is available to permit its use in stainless alloys for trim, radiator grilles, and hardware.

Due to the nature of their production during the war, some makers were and now are in a better position to return to civilian car production than others. Hence the models they offer may include more changes in design and related aspects than the cars offered by those who stopped engine and car production almost entirely, and then had to "pick up where they left off" just after Pearl Harbor. Such companies are of course at some disadvantage at this time, but the car buyer should not forget the very good reasons why some cars do not have as many "new features" as others.

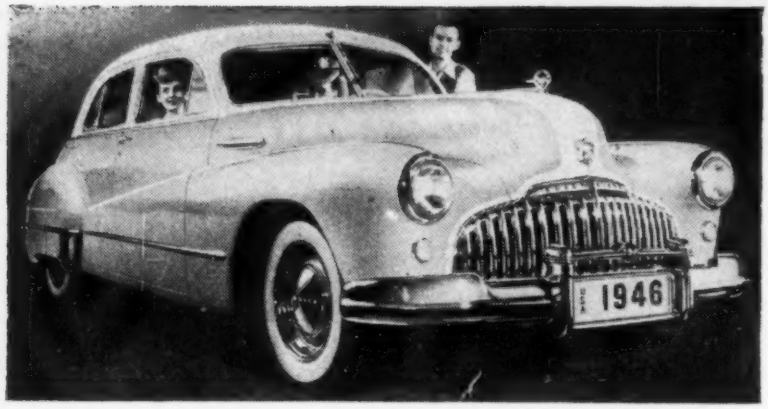
The "competitive battle" between car makers on price and details of design has not yet started, and it is believed that it will not start for some months to come. Nevertheless the groundwork for market leadership in the various price fields is being laid. Considering a car as a mere means of transportation, without respect to cost, there is little to choose between various makes, because, compared with the earlier days of the automobile industry, all the cars of "standard makes" are good. However, as in years past, much depends on what the owner needs or wants in an automobile.

It may be noted also that due to the price situation, such terms as "low price," "medium price," etc., have lost some of their meaning. With the minimum delivered price around $1000, there are no cars, at least for the immediate future, which can be bought purely for their so-called "transportation value." However, some such cars may be offered later, after the first rush of consumer demand is over.

The so-called OPA retail ceiling prices on the new cars will be very confusing to the public; the term is quite misleading, for OPA prices do not include many items such as delivery charges, extras, and taxes which must be paid before the car buyer can take his car. For example, official "ceiling price" for the 100-horsepower *Ford De Luxe 8*, four-door sedan "before delivery" is $931; *delivered* in the Detroit metropolitan area the actual price is $1075, a difference of about $144. On the *Ford Super De Luxe 8*, the announced ceiling price is $989, but the actual delivery price in Detroit is $1138, a difference of about $150.

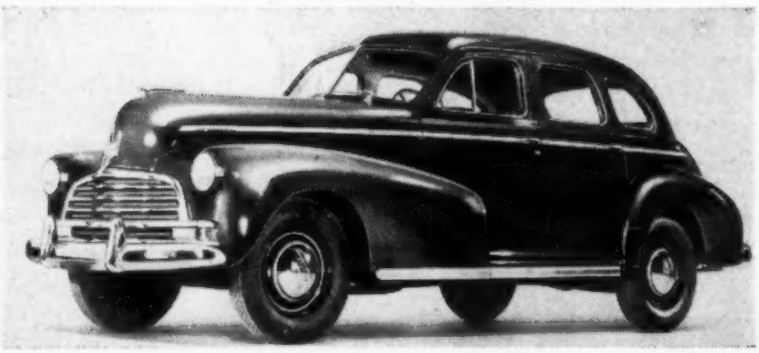
According to "Motor Age" for December 1945, the differences between these prices are made up by the following charges: Federal automobile tax, $44.78 to $53.24, depending on the model. Michigan sales tax, $28.24 to $33.14, depending on the model. Federal tax on tires, $5.88. Distribution and delivery in the Detroit area, $4. "Preparation" and "conditioning," $15. Gasoline and oil, $3.64. Oil filter. $9. Extra for the 100-horsepower engine, $25.

It should be noted that the delivered prices given above still do not include such extra optional equipment with which the car can be equipped at the factory when ordered, as bumper guards, heater, radio, electric clocks, etc.



Buick 8, Series 50, Super 4-Door Sedan

Cadillac, Model 62



Chevrolet Stylemaster 4-Door Sport Sedan

Ford 4-Door Sedan

Buick

Buick's engine is comparable with the engine of the 1940 model *Buick*, which used dual carburetor and aluminum pistons. Otherwise 1946 *Buick* engine is comparable with that of 1942. Body has been improved for longer service life. A high performance car for the fast driver who wants a bigger car than Ford can offer. (But note that *Ford* speed and performance are as much as any driver needs and can safely utilize.)

Cadillac

This car offers improved fuel and oil economy. When equipped with *Hydramatic* transmission, a very fine, luxury car for those wanting more in the way of comfort, appearance, and appointments than anything offered at a lower price. Fine performance.

Chevrolet 6

The *Chevrolet 6* should be satisfactory for any owner who has found this make to his liking previously. Some complaint about careless assembly in early display models, but this will undoubtedly be eliminated as soon as labor situation improves. May be slightly "easier-riding" than the *Ford*, but the difference is believed to be less than formerly, on account of improvements in *Ford* springs. This year's *Chevrolet* may be considered as closely comparable with the 1942 model.

Ford 6

Performance[1] of this car should be about the same as that of previous (1942) *V-8*.

[1]The ability of the car to respond quickly and powerfully when the accelerator pedal is depressed.

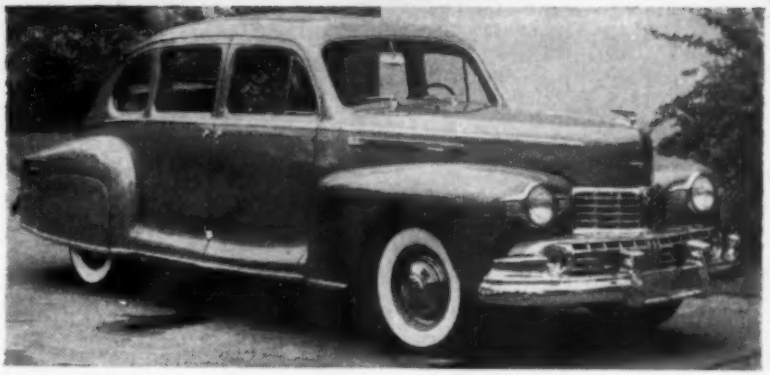
Probably better economy than 1942 *V-8*. Rugged chassis construction. New features should make this car especially serviceable for travelling men, fleet operators, and others desiring low-cost operation. Long maintenance-free life may be expected. It is considered that most of the service troubles previously encountered have probably been eliminated.

Ford V-8

Performance of this car will be above 1942 *Ford V-8*, and probably better than any other car at similar prices—better than all but a few cars at considerably higher prices. Possibly not quite as economical in operation as 1942 *Ford V-8*, but difference will be slight. As with the *Ford 6*, the chassis is ruggedly constructed. *Ford V-8* is suitable for owner who wants high speed, stability, and ability to withstand hard usage with minimum maintenance expense. As to price, is about on a level with the *Mercury* for 1942. Long service life of the baked-enamel body finish used on *Ford* cars for some years has proved its value during the past four years in reducing the need for exterior refinishing. Full oil-bath air filter and oil cleaner included at regular price. It is understood that the 1942 *Ford* engine will be available for 1946 cars, with a price reduction of about $25.

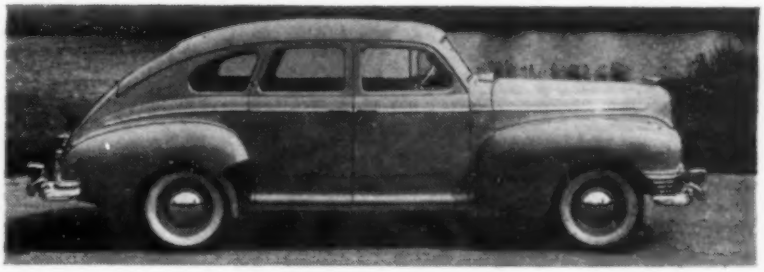
Lincoln

This year's *Lincoln* is comparable with the 1942 *Lincolns*. The improvements (window regulators, etc.) add to ease of handling. Fine performance, due to V-12 engine. Probably more attention has been paid to refinements of mechanism than in the *Cadillac*. Baked-enamel body finish.



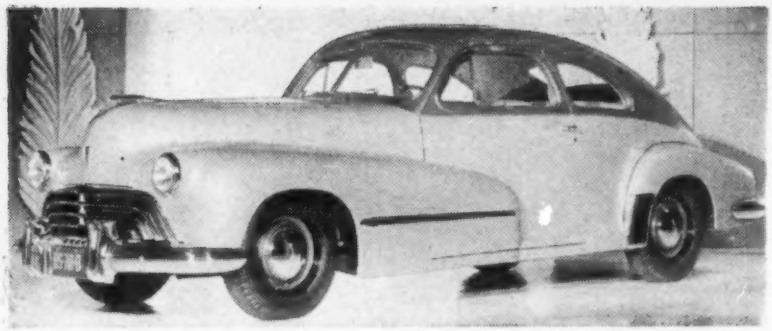
Lincoln Zephyr 4-Door Sedan

Mercury 2-Door Sedan

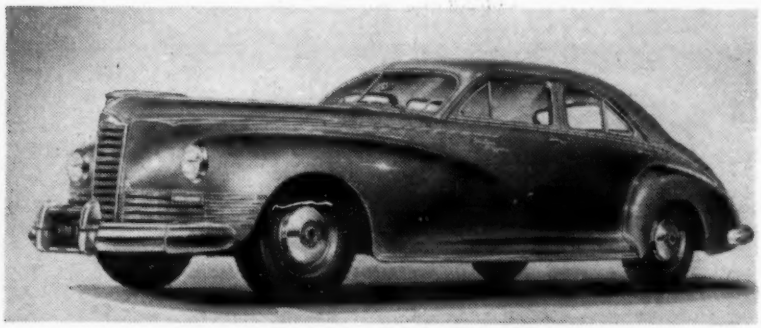


Nash "600" 4-Door Sedan

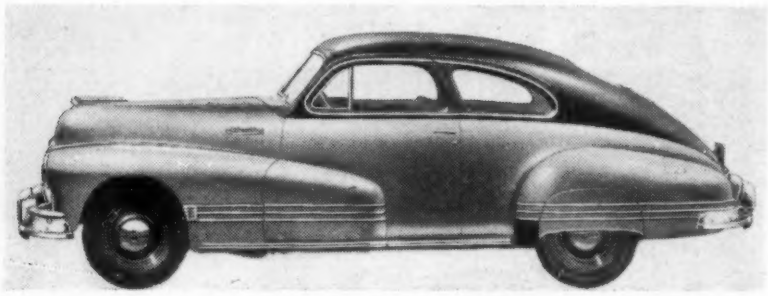
Willys Civilian Jeep



Oldsmobile "70" 2-Door Sedan



Packard Clipper De Luxe 4-Door Sedan



Pontiac Eight 2-Door Sedan

★ ★ ★

Mercury

Except for the prestige of the *Mercury* name and the slightly increased wheelbase as compared with *Ford*, there appears at this time to be little justification for purchasing this car in preference to *Ford V-8*, which uses the 1946 *Mercury* engine. The *Mercury* will undoubtedly utilize better upholstery materials and will presumably be more carefully assembled and inspected. Comparable with 1942 model. Full oil-bath air cleaner and oil filter included.

Nash Ambassador

Changes are such as to make for a better car. Comparable with the 1942 model. More equipment offered as standard, although a fair amount was included previously.

Nash 600

This model resembles the *Ambassador* more than in previous years. Numerous design changes. Although weight may be a little higher, should give better performance due to increased power. Since some of the changes may not have been made until recently, a short period of use in consumers' hands may be necessary before minor service troubles can be eliminated. More equipment offered as standard than previously.

Oldsmobile

Unless the prospective purchaser wants *Oldsmobile's Hydramatic* transmission, the *Pontiac* is probably the car to be preferred. Otherwise it is difficult to justify difference in price, at least in judging the car from a technical standpoint.

Packard Clipper

The *Clipper* is comparable with 1942 or 1941 model. No significant changes except easier steering and reduced steering gear wear, and more durable engine bearings.

Pontiac 6 and 8

This year's cars are largely comparable with 1942 models, except better performance due to aluminum pistons, and wartime service improvements. Wide-base rims and longer-lasting body.

Mercury and Lincoln for 1947

Information reaches us that *Mercury* and *Lincoln* lines of cars will be greatly expanded when models of the 1947 type become available. Just when this will occur is not yet known, but presumably it will be during the latter half of 1946. That this should be the case agrees with our statement relative to *Mercury* cars (see CR January

1946 BULLETIN) indicating that something would have to be done if the differences in price between *Ford* and *Mercury* cars for 1946 are to be justified, and conversely that the *Lincoln* Custom Models will not be offered for 1946. Also it may be noted that the present Ford Motor Co. plan calls for exclusive *Mercury-Lincoln* franchises, and without a much broader line of cars to sell than announced for 1946, it may be that little would exist to attract dealers, on account of the limited market and opportunities for profit.

Apparently the basic thinking back of an extension in the line above the price bracket of Ford, is to provide dealers with cars ranging in a series of gradually increasing delivered prices generally paralleling those of competitive manufacturers. General Motors Corporation has the *Pontiac*, *Oldsmobile*, *Buick*, and *Cadillac*, while Chrysler offers the *Dodge*, *De Soto*, and *Chrysler* "names" for those who wish to pay a price above the three most competitive cars (*Ford*, *Chevrolet*, and *Plymouth*). With only two chassis above the *Ford* (*Mercury* and *Lincoln* 126-inch wheelbase), Ford Motor Company would be at some disadvantage, as it has been in the past. By offering a choice between two engines (6 or 8 cylinder) for some GMC makes, the price gradient between them is further narrowed, but it is understood also that some such arrangement for choice of engines will be used for *Mercury* and *Lincoln*.

While so far as is now known, no additional "names" will be used to augment the 1947 *Mercury* and *Lincoln*, it is possible to apply the usual terminology of De Luxe, etc., or to use the auxiliary name or sub-brand method, a typical example of the latter being the *Clipper* model of *Packard*.

The rapidity with which any such developments as the above can take place will undoubtedly depend upon how soon the factory workers in the automobile factories get down to the business of producing cars again, and how soon active competition again develops between car manufacturers. With a shortage of at least 5,000,000 cars at present, no manufacturer is likely to offer much in the way of "new brands" until this backlog is at least partially used up—unless it should happen that labor conditions and related uncertainties and costs so impede the production of new cars that manufacturers will decide to skip the attainment of high production for their 1946 offerings and proceed with the necessary preliminaries for models that normally would not be produced until about a year from now. (Considerable speculation to this effect has existed for several weeks, but nothing authentic has been learned to date —January 15, 1946.) All whose livelihood depends upon the prosperity of the automobile business may well have something to think about if any such plans are indeed being considered, for manufacturers would then take time to retool and would discontinue any attempts to continue at normal operation of their assembly lines in the meantime. Thus the strikes and slow-downs which have plagued manufacturers almost since VJ Day might prove to be of little if any profit to those who have expected to gain economic advantage from their concerted stoppage of factory activity; for extensive layoffs and stoppages of assembly lines have always been inevitable during the month or more which elapses between the time one model is discontinued and a new one "put on the line." Manufacturers would use the interval to advantage to work out all preliminary plans for their newest models, while labor would have the serious problem of "sitting it out" for a much longer period than had been anticipated when the strikes were being planned against the automotive industry.

★ ★ ★

Consumers' Vigilance Returning

EVIDENTLY some business groups are aware that with the end of the war and removal of governmental limitations on quality with elimination of the numerous low-grade products that became common in many fields of production, consumers are going to be critical buyers again, hard to sell on shoddy and short-lived merchandise and phony or unsubstantial claims in advertising. This is what Ruttenber says in the recent issue of the *New York Daily News Record*, a textile trade paper: "Folks now crawling out of retirement read shopping guides, consumer leaflets attacking the unworthy, and are as sharp as razors."

Washing Machines—

A Preliminary Report

BECAUSE of the wide interest in this subject and the fact that many consumers in their eagerness to purchase new washing machines are having their names placed on dealers' lists to purchase as soon as their orders can be filled, it was considered advisable to present in this issue of our BULLETIN preliminary information on the washing performance of the first two machines received for test.

In general, CR cannot test goods until they are available in the stores where consumers buy, but under the unusual circumstances existing today, it was necessary to write the manufacturers and ask them to send us regular production samples of their appliances in advance of actual sale of those items by retail distributors. (If this had not been done, many readers of CR BULLETINS sorely in need of new appliances would unavoidably have to make their purchases before they had opportunity to read the judgments and ratings resulting from our tests.) Tests of mechanical and electrical appliances take considerable time, and the necessarily careful work in writing up of the findings, and their checking, and several weeks required by the printer add further to the time needed before the printed report can reach our readers. The procedure mentioned, of obtaining samples before the date when they can actually be purchased from dealers' stocks, can be followed only to a limited extent, since some manufacturers are unwilling to lose a single item from their production line that could be available for their regular market at this time of extraordinary difficulties and delays with material and labor, when they find it is difficult to meet even a small fraction of the insistent demands from dealers and ultimate consumers for immediate delivery of many hundreds of thousands of vitally needed appliances.

The two machines now undergoing test are a *Bendix*, Standard Model, and a *Maytag*, Model E2-LP—with roll wringer. They were lent by the manufacturers, and each was specified to have been taken at random from the regular run of production.

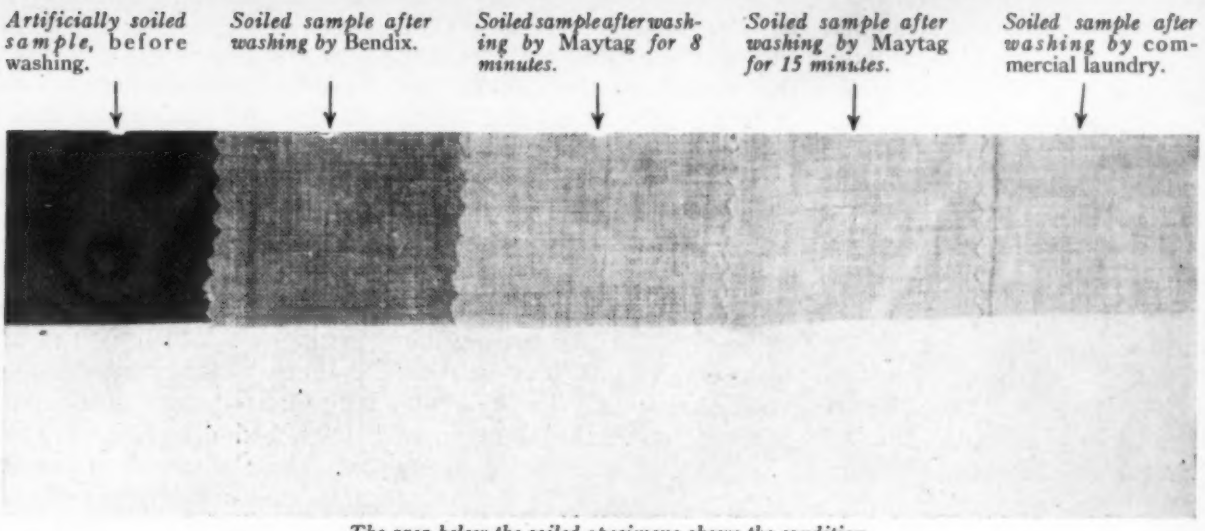
It must be remembered that the tests on these machines are not complete, as they cover so far only *washing effectiveness* and *drying ability*, and while these, from the housewife's point of view, are probably of outstanding importance, final ratings cannot yet be determined for either washer because other important tests including electrical safety, evaluation of safety release device on wringer models, wearing effect of the machine on clothes, constructional quality, etc., have not yet been made. A fuller report will be made available to our readers when test work is completed; this will be rendered more useful through making evident the relationship of the performance of these machines to a number of others representative of a wide range of the manufacturers' offerings of different types and prices.

Bendix, Model S (Bendix Home Appliances, Inc., South Bend, Ind.) $169.50. The *Bendix* is the best known of the so-called automatic washers, which have a great appeal to the housewife because she can load the machine with dirty clothes, turn it on and proceed with other tasks while the washer completes its work and shuts off, ready for removal of the washed garments, with some of the rinse water removed by the action of a centrifugal extractor.

The present model is claimed to have various improvements over the pre-war model *Bendix*. The maximum load for the machine is 9 pounds of clothes, and the complete cycle is as follows:

1. *A soaking period*, which can be dispensed with if desired, requiring 6½ gallons of lukewarm water (CR's tests were made both with and without the soaking period).
2. *Washing period*, which requires 6½ gallons of water at 125°F.
3. *A first rinse*, requiring only 2¼ gallons of water at approximately 100°F, through which the clothes are splashed.
4. *A second full rinse*, using 6½ gallons of water.
5. *A third full rinse*, also using 6½ gallons of water.
6. *Extraction of water* by spin drying.

The total amount of water used for one complete cycle is 28¼ or 21¾ gallons depending upon whether or not a soaking period was used; of this amount 17½ or 14 gallons


Artificially soiled sample, before washing.
Soiled sample after washing by Bendix.
Soiled sample after washing by Maytag for 8 minutes.
Soiled sample after washing by Maytag for 15 minutes.
Soiled sample after washing by commercial laundry.

The area below the soiled specimens shows the condition of fabric to which no soiling material at all *was applied.*

Reproduction of photograph of five specimens of fabric originally soiled to an identical extent and by the same method, showing maximum soil condition at left and different increasing degrees of "whiteness" produced by two household washing machines (Bendix and Maytag), and by a commercial laundry.

(about 2 or 1½ gal. per lb. of clothes) were hot water, assuming a hot water supply at 140°F, and cold water supply 50°F.

The washing effectiveness was determined by washing standard soiled samples (sewed to towels and sheets) of which the reflectance (whiteness) was measured before and after washing, by a photoelectric instrument known as a reflectometer. The measurements obtained gave a measure of the relative washing effectiveness of the machines.

The washing effectiveness of the *Bendix*, whether or not a soaking period is used, was found to be considerably less than that of the *Maytag*. Use of the soaking period before the washing cycle did not greatly improve the washing effectiveness of the *Bendix*.

On the effectiveness of drying the clothes, the weights of the clothes were taken before washing and at the end of the spin-drying cycle. With the *Bendix*, the water left in the clothes (expressed as a percentage of the dry weight of clothes) was about 127 percent, so that the original 9-pound load contained after completion of the mechanical water extraction by the *Bendix* dryer, about 11½ pounds of water, giving a total weight of 20½ pounds.

The complete cycle from the time the clothes were placed in the machine until they were ready for removal required about 34 minutes; this was increased to 50 minutes when a pre-soaking period was included.

Maytag, Model E2-LP (The Maytag Co., Newton, Iowa) $139.95 with cast aluminum tub. This was a conventional non-automatic wringer-type machine having a capacity of about 8 pounds of clothes and 16 gallons of water. After a washing period of 8 minutes (recommended by the manufacturer for badly soiled clothes), clothes were run through the roller wringer into a stationary laundry tub containing 16 gallons of rinse water. The load was run through the wringer again into a similar tub also containing 16 gallons of rinse water again at 100°F, and finally through the wringer. The total amount of water used for 8 pounds of clothes was 48 gallons; of this 31 gallons were hot water with hot water supply at 140°F and the cold water supply at 50°F, or approximately 4 gallons of hot water per pound of clothes. In actual practice two or three 8-pound loads of clothes would be washed per tubful (16 gal.) of hot soapy water. When this is done, the total amount of hot water used by the *Maytag* would be about the same as for the *Bendix*, which requires fresh water for each load.

The washing effectiveness of the *Maytag* was considerably better than that of the *Bendix*. The drying effectiveness of the *Maytag* was around 97 percent. That is, the 8-pound load contained 7¾ pounds of water, giving a total weight of 15¾ pounds. The time for washing and rinsing one 8-pound load

was about 28 minutes or about 18% less than the *Bendix* cycle when used without pre-soaking. It was noted that the washing period of 8 minutes recommended for the *Maytag* was less than that provided in the *Bendix* cycle (12 minutes) and also less than is customarily used by housewives in home laundering. Additional tests were therefore made on the *Maytag* machine using a washing period of 15 minutes, to determine the effect of washing time more characteristic of that used in the average home. This was found to increase the washing effectiveness by a significant amount, perhaps 12 or 15%.

Summary of Performance

In order to obtain a comparison of washing effectiveness produced by these machines, two sets of soiled samples were submitted to a commercial laundry to be subjected to their regular washing formula as used for white cotton goods using no bleach.

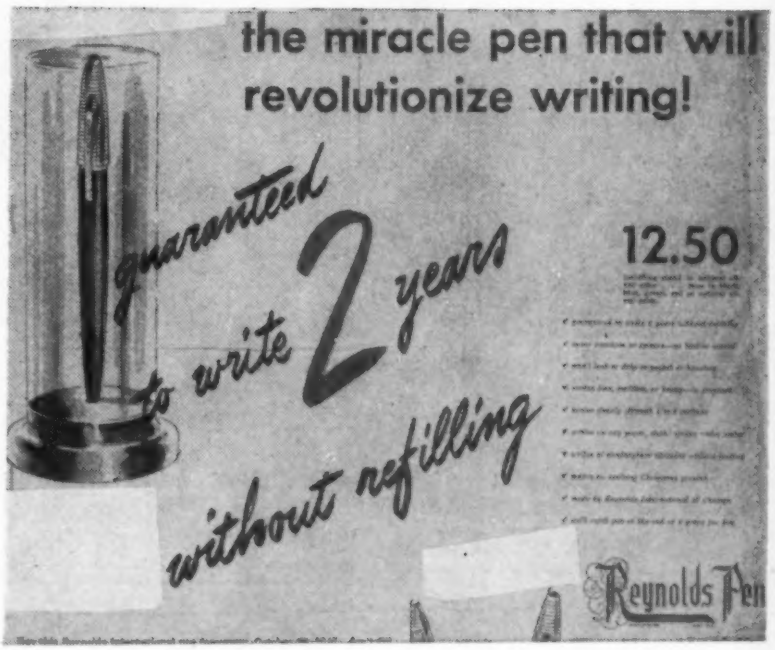
It was found that the *Maytag* washing machine when the washing period was increased from the 8 minutes recommended by the manufacturer to 15 minutes gave a cleansing action closely approximating that obtained in a commercial laundry (believed to be of superior performance as laundries go). The *Maytag* was considerably more effective in cleansing the clothing being washed than the *Bendix*. The *Maytag* wringer removed about 25 percent more water than the *Bendix* centrifugal dryer (clothes were about 25% drier); the extra water removal is very desirable, both from the point of handling and as an aid to quicker drying especially on humid days or in the winter when clothes cannot be hung outside to dry. From these tests it would appear that the advantage the *Bendix* has in being fully automatic (thus saving manual effort) is likely to be offset for some users by its significantly lower washing and drying effectiveness.

Consumers will have to decide for themselves whether the advantage of automatic operation is sufficient in their own case to offset the disdavantages of somewhat less clean clothes and less satisfactory drying. To some extent, the decision will depend upon the individual requirements, the availability of help in the laundry, the standards as to whiteness of the finished wash, the nature and amount of dirt to be removed. (Standards of required whiteness of laundered articles are probably lower in cities and towns where a great deal of soft coal is burned, or there is much factory smoke, for in such locations it is difficult to obtain the relatively complete removal of sooty particles, and a degree of grayness of fabric may be necessarily tolerated in districts where the air is commonly dirty and smoky.)

Reviva—
Furniture Cleaning Mixture

Reviva, Jackson of London ($1 for ½ pt.). This is a very expensively-priced material for removing spots on furniture; its label designates it as a spot-remover, polish, and "tonic" for furniture. It is claimed to be applicable to varnished, shellaced, and lacquered surfaces. Its maker, Mrs. M. Jackson's Studio, 15 W. 51 St., New York City, advises that it should not be used on very cheap finishes (presumably because the cellosolve which it contains would dissolve the pyroxylin lacquer used to shorten the manufacturing processes in the making of low-grade furniture). Though the label claims "spot will usually vanish," actual trial indicates that spots or stains that are deeper than the finish are not much affected by *Reviva*. For lighter spots, that are surface marks, the product has some value in improving appearance. It was noted on trial that *Reviva* removed the finish to an appreciable extent on lacquered, shellacked, and varnished surfaces. Long-repeated use might thus result in a considerable degree of removal of a varnished or lacquered finish. Chemical analysis indicates that the *Reviva* product is essentially petroleum naphtha and a light mineral oil with a small amount of butyl cellosolve (a lacquer solvent). Red dye is added for color. It is, of course, a combustible mixture.

The New Reynolds Fountain Pen



CONSUMERS who read a great deal of department store advertising have no doubt seen advertisements of a new fountain pen, the *Reynolds International*, variously advertised as "fantastic," "miraculous," "a Buck Rogers baby," "atomic age pen," "capable of writing for two whole years on the remotest ice floe in the Aleutians where ink had never been heard of," or "in the stratosphere at 20,000 foot altitude," " or under water." One imaginative ad-writer referred to the new pen as "the ideal Christmas present for anyone, age 8 to 80."

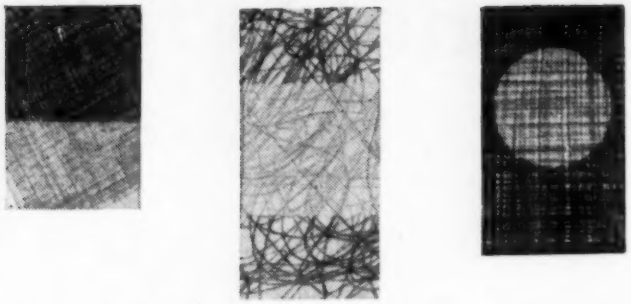
The tip of the *Reynolds* pen contains a very small ball bearing which acts as the writing point, and feeds ink to the paper by rolling it onto the surface from a chamber behind the point. The pen carries a supply of ink (called "*Satin-flo*" by the promoters) in an amount claimed to be sufficient for two-years' use of the pen. Parallel to some tendencies in modern automobile design—by which even minor repairs and adjustments are channeled to the manufacturer's own service shop rather than to a general auto repair shop or the owner's garage—this pen is not to be refilled by its owner, but by the manufacturer, who will re-equip it with a stock of the special purple ink for 50c, or permit its owner to trade in his present pen barrel for a new filled one at a charge of $1.

According to various trade paper news items, the purchasing public's excitement about this innovation in the fountain pen world is tremendous, and people have all but tramped over one another to buy many thousands of pens from one New York department store which had a lead in their distribution. Sales are booming to such an extent that it is even asserted that 5000 pens were sold by 11 in the morning of the first sale in New York City; that subsequently, 50,000 of the pens have been rushed to New York by airplane to keep up with demand.

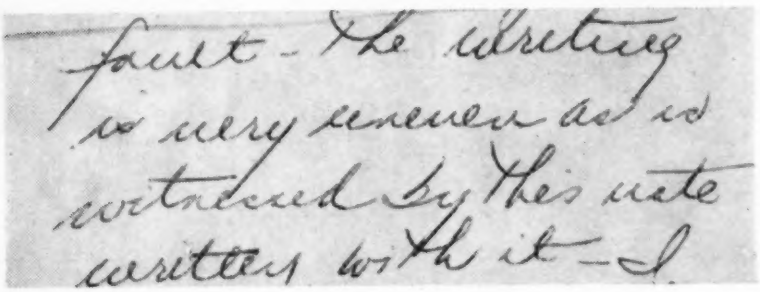
There are a number of things wrong with the *Reynolds* pen, but two of the faults are so serious that it is doubtful whether any but a few would wish to purchase the pen if they were fully informed about its characteristics.

The first is that the writing is quite *uneven* and has somewhat the appearance of writing that would be done by an indelible pencil on unevenly dampened paper. The unevenness of the quality of the ink line, changing from light to dark and back again continuously, is definitely bad for legibility.

The second fault is more serious, at least for most people, who like to read their writing with certainty and ease after some months or years, in that the "*Satin-flo*" ink is made of a very fugitive dye—so fugitive indeed that it would seem that the greatest usefulness of the pen might be for persons who have reasons for wishing their writings to fade out rather quickly in case they should be exposed to light. Since two of



The illustration shows the effect of a short time-period of daylight or Fadeometer exposure on the ink lines made by the Reynolds *pen. Darker areas, before exposure; light areas, after. In the picture below, the unevenness of the writing produced before the sample was subjected to light fading is observable.*



the major reasons (for most people) for writing with ink is to obtain *permanence* and *strong contrast*, so as to make for maximum readability, the pen seems to fall down on two of the major points that determine use of a fountain pen in preference to a pencil.

The accompanying photographs show clearly the effect of a very short period of light fading, both under daylight and in the Fadeometer (a laboratory ultraviolet accelerated-fading apparatus), and the photographs pretty well tell the story of why many would want to go slow in deciding upon any drastic "improvement" on an old-fashioned and well-tried tool.

Editor and Publisher, the trade journal of the newspaper business, boasts of the fact that it was newspaper advertising that put this pen with "its moderate price tag of $12.50" over in such tremendous fashion. Nothing has been said in the various advertising journals which have dealt with the *Reynolds*' phenomenal sales about the adequacy of the pen from the consumer's standpoint. We may perhaps hope that some day trade journal editors considering the success of a whirlwind advertising campaign will give some thought to the reasonable needs and requirements of those who spend the money that makes big-scale advertising of new and unusual products possible.

Another ball-pointed pen is coming to the market soon, the invention of a Hungarian, Laszlo Biro, to be marketed by an Argentine corporation, Eterpen, S. A., who have licensed two U.S. firms, Eversharp and Eberhard-Faber, to manufacture and sell their product. If anyone feels the need to own a pen with the special properties afforded by a rolling-ball tip, he might do well to wait and see what the new *Eterpen* has to offer before buying.

C. Not Recommended

Reynolds Pen (Reynolds International Pen Co., 732 S. Federal St., Chicago 5) $12.50. Pen with desk stand (which holds the fountain pen in a vertical position—not a convenient arrangement). Writing is somewhat pale, and decidedly uneven; ink flow too scant for good contrast, and variable even in a single word. The self-contained long-lasting ink supply is of a highly fugitive (light-fading) dye. Guarantee provides for the replacement of the pen *if it fails to write* during two years, but includes no provision for refund if the pen is found unsatisfactory by users.

★ ★ Corrections and Emendations to Consumers' Research Bulletin ★ ★

Lexol Leather Conditioner
Page 26, Col. 2
April '45

A recheck of the analysis of *Lexol* indicates that the analyst was in error in reporting that the product contained mineral oil. The material is completely saponifiable in the sense that the fat is "broken" by alkali, but because of the presence of lanolin or similar fat, an unsaponifiable fraction of the mixture was found in the analysis.

Men's Suits
Page 17, Col. 2
November '45

The fabric of the *Bond*, Executive Group, Lot 50201, had a *two-ply* warp and two-ply filling. (This was incorrectly reported as a single-ply warp and two-ply filling.)

Phonograph Needles
Page 22
December '45

The magnification of the needle points illustrated was erroneously stated as 62.5×. The actual magnification was 19.

Four Phonograph Needles with Sapphire Tips

THE sapphire needle has been considered the answer to the record listeners' prayer for convenience in playing a number of records at a sitting, and it has become very popular for use with automatic record changers; its use is indispensable in pick-ups with "built-in" needles. The sapphire has come to be the preferred point among professional sound men. It should be kept in mind, however, that there is no such thing on the market at the present time as a needle with a *permanent* point, and if permanence of point were achieved it would likely be at the cost of very severe record-wear. Indeed, in June 1943, the Electrovox Company, makers of *Walco* needles, agreed to eliminate the word "permanent" from their advertising in describing their needles, as the result of action taken by the Federal Trade Commission. The company agreed also to stop claiming that their sapphire needles would not wear down records.

Some experimental work is being done with diamond points, which might more accurately be claimed to be permanent, but none are readily available at the present time for general consumer use. In the light of CR's findings regarding the damaging effect of sapphire needles on the records themselves, it seems doubtful that many will wish to use on their most prized recordings a needle so extremely hard and resistant to wear as the sapphire and the diamond, at the risk of wearing the record at a relatively very rapid rate.

Before making a purchase of any sapphire, it is important to make careful inspection of the tip with a good magnifying glass with a magnification of not less than 10×. One quick way one expert has found of making a test for a defective needle is to rotate the point against the fingernail. A defective needle will scratch or cut into the nail, while a perfect one will not. If this does not happen to be practicable, buy it with the understanding that it may be returned after inspection at home (before it has been used, of course) if it should appear to be defective. Reports from reliable observers indicate that new sapphire needles are often defective.

The first *Walco Floating Jewel* needle purchased for CR's test was found not to have the proper shape at the point and a second one had to be obtained for the test run. Great care must be taken in handling the pick-up with a sapphire needle in it, whether of the built-in type or not, in order to guard against possible chipping or other damage from dropping it too roughly on the record in starting. A sapphire needle must also be inspected frequently, after it has been inserted in the pick-up and put into use, for even a slightly chipped or defective sapphire needle will seriously damage any record on which it is played. A sudden increase in scratch is a sign that a sapphire has developed a defect. Besides their susceptibility to sudden and unpredictable chipping, sapphire needles have the disadvantage of causing very rapid wear of the records on which they are used.

Tests of the so-called precious metal needles (CR BULLETIN, January 1946) showed that they caused significant damage to records after approximately 150 playings. As the accompanying table indicates, all four of the sapphire needles showed an approximately equivalent amount of damage to the record after approximately 100 playings. It would appear that a fair conclusion to be drawn from the test data, so far, is that the sapphire needles are about 50 percent harder on records than the precious metal alloy needles such as *Pfanstiehl* and *Fidelitone*. So far as concerns wear on records by sapphire needles as compared with steel or chromium needles, the sapphire needles are about three times as damaging (if it is assumed that the steel or chromium needle is changed regularly as soon as it has played a number of sides corresponding to the appearance of significant wear—e.g., about 10 plays in the case of the chromium needle). Where the value of records is not a preponderant factor, sapphire needles have significant advantages, for those tested by CR gave the best reproduction, from a record in new condition, with the least amount of surface noise, of the three types of needles tested. (The "chromium"-steel group

Comparative Wear Resistance of Four Sapphire Needles

(Note that this wear test was made on the same make of record and the same recording throughout. The number of playings permissible under these artificial conditions might be several times greater than when playing records of different makes successively.)

Brand Name & Manufacturer	*Price*	*No. of Plays Claimed*	*No. of Plays at which Needle Showed Excessive Wear*	*No. of Plays at which Record Showed Damage (Approximately)*	*Condition of Record at End of Test*	*Surface Noise Through Speaker*	*Needle Noise or Scratch*[1]
Duotone "Star Sapphire" (Duotone, 799 Broadway, New York 3)	$5.00	10,000	450	100	Badly Worn	Least	Slight
Walco "Tru Trac" (Electrovox Co., 424 Madison Ave., New York 17)	1.00	5,000	350	100	Badly Worn	Slight	Slightly Noticeable
Capitol (Electrovox Co.)	2.50	10,000	325	100	Badly Worn	Slight	Slight
Walco "Floating Jewel" (Electrovox Co.)	2.50	"Up to 10,000 in most 1941 and 1942 pick-ups of 1¼ oz. needle pressure."[2]	Showed Ragged Wear at 50	100	Badly Worn	Slight	Slight

[1]This is the noise which issues directly from the needle tracking the record without passing through the audio amplifier circuit and the speaker.
[2]In a practical sense, this claim is misleading, since few but "professionals" would have a pick-up having these particular characteristics.

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were reported in CR BULLETIN, December 1945, and the "precious-metal" group were reported in CR BULLETIN, January 1946.) The test conditions were alike for all three types of needles. An Astatic type L-40-A pick-up giving a needle point pressure of 1¾ ounces was used with each needle, which was played on *Victor Red Seal* record, *American Salute* (Gould. Boston Pops Orchestra under Fiedler. Victor 11-8762. $1).

The finding regarding quality of reproduction with sapphire needles confirms observations reported in The American Record Guide by several experts. One of these (Dr. Matthew T. Jones, Amer. Rec. Guide, Sept. 1945) pointed out that his tests using *Duotone "Star Sapphire"* with various radii at the tip showed that it was possible to play 99 percent of his record collection with little or no audible distortion and with a minimum of scratch even with the treble tone control set so as not to filter out the high frequencies. Dr. Jones found that almost half of his records required a needle with a point radius of .0022 inch, while the rest required a needle with either a .0025 inch or a .0030 inch radius. Most record collectors will perhaps not feel qualified to make the observations necessary to secure this fine adjustment to the requirements of the individual records.

As Dr. Jones himself warns, it is necessary to use great care in removing and replacing sapphire needles to place the point with the exact orientation of the point with respect to the pick-up at which it was used before—a somewhat difficult operation, and an impossible one unless the needle has been provided with a distinct flat area by the manufacturer to determine this orientation. The manufacturers of *Victor* records advise against attempting to replace either a sapphire or metal needle, and they are perhaps quite right in their assumption that the average person might not get the needle back in the right position when replacing it. This would be

true either of a sapphire or "precious-metal" needle.

Another writer in the American Record Guide reports that the *Duotone "Star Sapphire"* (as well as the *Permo "Fidelitone Master"*) have filtering characteristics and require a higher volume-control adjustment to get the volume level afforded by a regular steel needle. All needles have some degree of filtering action, and this will probably be more pronounced with needles which have a thinned section between point and base (such as the *Pfanstiehl* and *Garod Permatone*) or a bent shank (such as *Recoton Primus* and *Jensen Royal*—both sapphire needles).

There doesn't appear to be any single needle available at present that combines long wear quality with good tone reproduction and absence of pronounced wear effect on the record. All four of the sapphire needles showed very pronounced damage to records at the end of 100 plays, with significant damage well before that point was reached. Nevertheless such needles will probably serve on popular or jazz records where novelty and frequent change is the thing and long life of records is less important than the convenience of not having to bother with frequent needle changes. It seems obvious in the light of CR's findings that a pick-up with a "built-in" needle is an undesirable type, since fairly frequent change of needle will be required and the expense of changing the complete unit comprising needle and crystal or other vibration-responsive element will be considerable.

As the reader will note from the accompanying table, the needle with the longest life was the *Duotone "Star Sapphire"* followed by the *Walco "Tru Trac."* *Capitol* was third best in this respect and the shortest-lived was the *Walco "Floating Jewel."* All produced about the same rate of record-wear. The *Duotone* needle has shown some superiority in respect to quality of reproduction, although as to this characteristic, all four were good. (Next month CR will present a brief summary report, bringing out all the principal conclusions regarding all three types of needles, and a convenient table showing the findings on all the needles studied to date)

Water and Gasoline Don't Mix—

But There is a Simple Way of Dealing with Water that Has Gotten into Your Gasoline

THAT water and gasoline do not go along well together in automobile gasoline tanks and carburetors was all too evident to many drivers during recent severe cold spells. The manager of the emergency service of the Automobile Club of New York reported that during the period of cold weather experienced in December more than 4000 motorists received special help in getting their cars started from the automobile users' organization and that frozen gasoline lines resulting from motorists' inattention to this problem led the list of causes of trouble that prevented the starting of cars. Many cars must be left overnight in driveways, on streets, and in unheated garages. Though starting easily at home or in mild weather, such cars under extreme winter conditions have often refused to start even though starting motors and ignition were O.K. and the cooling system and radiator were not frozen up. When primed with gasoline through the carburetor intake, the engines would start quickly enough, only to die again as soon as the added gasoline was used up. Water in the gasoline tank, gasoline lines, fuel pump, or carburetor, or in several of these was to blame, and its removal was the only means by which the trouble could be eliminated.

It is believed that this water would not normally have its source in the gasoline as it is purchased, provided the gasoline has been bought from a well-managed filling station,

for the oil companies use appropriate means to eliminate water from the fuel in their storage tanks.

The cause of the trouble is twofold. In many cases the water present in the automobile's tank and intake system is the accumulation of months of summer driving, its presence being due to condensation of water vapor over this period of time. The amount may vary from a spoonful to half a cupful or more, but even a small amount of water when frozen somewhere in the gasoline feed system is enough to clog it and prevent the flow of fuel to the carburetor.

A second cause of water accumulations, and one for which the design departments of the car manufacturers are responsible, is that with many cars, especially those with the fuel filler cap located under the rear fender, considerable quantities of water can enter the gasoline tank through the vent hole in the filler cap. (Failure of engine to run may be due to clogging of this hole with water or dirt, resulting in a partial vacuum being created inside the tank; this prevents the fuel pump from operating, as it can work against only a limited "suction lift.") A poorly made joint where the filler neck is attached to the gasoline tank also permits entrance of water. (Leaky joints at this point are found on some cars.)

If water accumulates in the fuel pump, the diaphragm may be so solidly frozen in that it breaks when an attempt is made to start the engine—adding further to the problem of getting the car into service again.

In any case the immediate remedy is to put the car in a sufficiently warm place to melt the water in whatever part of the system it may have accumulated. The water may then be removed by draining it from the fuel tank (being heavier than gasoline, it will run out of the drain plug located at the bottom of the gasoline tank before gasoline does). Only a small amount of fuel need be lost, since the plug can be quickly replaced as soon as the water has run out. In normal cases, loosening the plug so that a trickle runs out around the threads will be enough, as the fuel will tend to push out the water first. The fuel lines, pump, and carburetor must be disconnected and then drained out, preferably also blown out with air (being careful not to damage the pump by excessive pressure). (See car owner's manual or instruction book for your car for draining of fuel pump.) This is the usual remedy and is satisfactory except for one important fact, namely that no certainty exists that more water will not accumulate and the trouble be repeated in the not too distant future.

A simple remedy that will make it unnecessary to drain out the water from the tank and lines and will help, too, in avoiding further accumulations that impede starting the engine is to put some alcohol in the fuel tank, start the engine, and run it for a while either in the garage (with all garage doors fully open) or on the road—if it is not cold enough to freeze any water remaining in the system. The quantity used should not exceed one quart for the usual size of automobile fuel tank (13 to 15 or 16 gallons). A pint will ordinarily suffice. The method will not work satisfactorily, of course, if accumulated water has already congealed to ice; it functions only on water in the liquid state. The ordinary anti-freeze methanol (wood alcohol) will do. Some of the methanol anti-freezes—not recommended for regular use as anti-freeze in the radiator system—are: *Genuine Ford*, *Genuine General Motors*, *Mobile*, *Winter Flo*, *Trek*, and *Zerone*. A product called *Quixol* has been used successfully; *Quixol* is believed to be a methanol brand name of Commercial Solvents Corp. As ethyl or grain alcohol (ethanol) is, like methanol, freely soluble in water in all proportions, and differences in the solubility in gasoline may be unimportant for the purpose, it is probable that ethyl alcohol of high proof, as used for anti-freeze, will do just about as well as methanol for removing water from the fuel system. (It is assumed that any denaturant used in the ethanol will not significantly affect the solubility of the alcohol itself.) Isopropyl alcohol, much used as the basis of rubbing alcohol nowadays, would probably do in a pinch, though isopropyl alcohol is usually sold in a form already fairly heavily diluted with water; hence if it were not bought in the pure state, it might not be as effective as the other alcohols.

To take care of any further accumulations of water in the fuel system, a small amount of alcohol may be added occasionally during the winter. There is no need to use an excessive quantity; too much may make the car harder to start, because alcohol requires more heat to vaporize it, but this effect in the proportions recommended will be small.

What happens when alcohol is added is that the alcohol and the water immediately dissolve in each other, and the alcohol present, if sufficient in amount,

prevents freezing of the water, which in the liquid state can pass through fuel piping, fuel pump, and carburetor, without producing a stoppage of the lines. We thus are able to deal with the water-in-alcohol mixture as a liquid instead of as a block of ice plugging up tubes, pump, and carburetor jets. The water-alcohol solution in the fuel system does no harm, and if it should be the case that starting is adversely affected somewhat, a moment's extra cranking will pass it through the engine. No doubt some of the alcohol-water solution will dissolve in the gasoline, since alcohol will do so in small proportions even if some water is present.

A useful expedient to prevent water from entering the tank through the vent hole in the gasoline filler cap is to invert a loosely fitting tin can over the cap. This can be prevented from rattling by squeezing the end and wedging it slightly over the cap. It must not of course fit so tightly that air is prevented from entering through the vent hole as fuel is consumed, but it is very unlikely that anyone would achieve so snug a fit without trying hard to do so. Although this method of preventing water from entering is not good "engineering," it works—works better than what the manufacturers' engineers provided, in many cases. Car manufacturers should get busy and so design tank filler and cap, and so locate and protect them, that water does not enter under any circumstances likely to obtain even under the worst driving conditions.

COCOA—for grown-ups or children?

In modern times when adults have a considerable number of beverages from which to choose, including tea, coffee, and cocoa, it has been customary to consider cocoa and cocoa-flavored milk as desirable drinks for children. This attitude may have developed as the result of a desire to get milk down the throats of reluctant children by flavoring it with chocolate and sugar. The tendency to regard cocoa as a health food or drink for children is, however, a far cry from its earliest uses.

Cocoa was discovered by Cortez when the Spaniards invaded Mexico in the early sixteenth century. "Chocolatl" was a royal drink with which the Aztec ruler Montezuma was wont to regale his military conquerors. According to one account of those days, the drink was prepared by grinding cocoa beans to powder, adding water, and stirring thoroughly. Then the mixture was briskly beaten and poured from one vessel to another to make it foam. The writer commented that it was necessary to open the mouth wide in drinking it in order to include the foam. At country breakfasts even today in Mexico, it is reported that chocolate may be served made of pure ground cacao bean, flavored with cinnamon or vanilla; this is mixed and cooked with water and very thoroughly beaten so that the resulting drink is half foam.

In the course of time the use of cocoa spread from Mexico and Spain to other countries. By the middle of the seventeenth century chocolate houses were fashionable in England and Germany. In England, however, this beverage was supplanted in popularity at the end of the century by coffee which in turn was supplanted by tea. The London coffeehouses in the seventeenth century were accustomed to serving coffee, chocolate, and tea. English "tea gardens" of the eighteenth century also served a variety of beverages, including chocolate. Tea, however, became the most popular of the three in England, while Americans turned to coffee. The United States in recent years, however, has been the world's largest importer of cacao, the raw material from which cocoa and chocolate are made. It should be borne in mind that there are many uses for cacao products besides the cocoa beverage and chocolate milk; such uses include candy and other food products and cacao butter. The shells are used for fertilizer, animal feed, and even fuel.

The chief sources of supply are no longer the tropics of Mexico where Cortez discovered "chocolatl." In pre-war days, the major source was the African Gold Coast, followed by Brazil, and Nigeria. Cocoa varies in flavor according to variety. The Criollo type from Venezuela is reported to have a sweet flavor and is considered to be the finest grown. The Forastero from West Indies, which has an unpleasant bitter

flavor, was in 1939 at the bottom of the price scale in New York market. One expert grades roasted Java, Ceylon, Samoa, and New Hebrides cacaos in the first class, with Puerto Cabello supplies second. The New York Cocoa Exchange has established nine grades of cocoa based on the soundness of the cacao bean, the geographic area where it was grown, and the price per pound.

The cacao tree grows only in the tropics, where the growing season is continuous the year round. The pods, which resemble elongated cantaloupes, grow on short stalks directly from the tree trunk as well as on the branches. The pods are cut from the trees when ripe and cracked apart. The cacao beans are removed and allowed to ferment until they turn brown and acquire their characteristic odor. They are then ready to be shipped for export. The manufacturing process includes winnowing to remove miscellaneous debris, roasting, blending of different variety of beans to secure the desired aroma, flavor and texture, then a smooth, fine grinding or milling. The resulting chocolate liquor is allowed to harden and then some of the cacao butter is removed and the cake is ground and screened for cocoa. Since the days of Montezuma there have been various changes in the names of "chocolatl" but it is common practice to use the term *cacao* to refer to the beans, the tree, the pod and the butter. *Cocoa* is the commercial name of the powder used to make the beverage and for flavoring other items and is also the name of the beverage itself.

COCOA and chocolate products as the consumer buys

CR's TESTS

[Brands are listed in order of increasing amount of tannin

BRAND NAME	Price per lb.	Theobromine		Caffeine	
		Percent	Grains per cup	Percent	Grains per cup
Hamstra's Dutch Process Cocoa (Mfr.: H. Hamstra & Co., New York and Chicago)	86c	1.0	0.321	0.38	0.117
Nestle's Ever Ready Sweet Milk Cocoa (Mfr.: Peter Cailler Kohler Swiss Chocolates Co., Inc., Fulton, N.Y.)	42c	0.05	0.132	0.03	0.090
Van Houten's Cocoa (Mfr.: C.J. Van Houten & Zoon, Inc., New York City)	69c	0.87	0.403	0.20	0.093
Our Mother's Pure All Occasion Cocoa (Distributed by E. & A. Opler, Inc., Chicago and N.Y.C.)	19c	1.3	0.662	0.37	0.188
Hershey's Breakfast Cocoa (Mfr.: Hershey Chocolate Corp., Hershey, Pa.)	24c	1.1	0.622	0.40	0.228
Iona Cocoa (Distributed by Great Atlantic & Pacific Tea Co., N.Y.C.)	9c	0.79	0.670	0.14	0.119
Wilbur's Breakfast Cocoa (Mfr.: Wilbur-Suchard Chocolate Co., Inc., Phila., and Lititz, Pa.)	20c	0.92	0.667	0.30	0.218
Baker's Breakfast Cocoa (Mfr.: Walter Baker & Co., Inc., Dorchester, Mass.)	24c	1.1	0.850	0.32	0.254
Baker's DeLuxe Dutch Process Cocoa (Mfr.: Walter Baker & Co., Inc., Dorchester, Mass.)	44c	0.98	0.794	0.43	0.349
Rockwood's Breakfast Cocoa (Mfr.: Rockwood & Co., Brooklyn, N.Y.)	22c	0.89	0.742	0.58	0.483
Maillard's Breakfast Cocoa (Mfr.: The Maillard Corp., N.Y.C.)	40c	1.0	0.875	0.36	0.302
* * *					
The following is neither a cocoa nor a chocolate, but a mixture of the two, with added sugar, vanillin, and other artificial flavor.					
Ghirardelli Sweet Ground Chocolate and Cocoa (Mfr.: D. Ghirardelli Co., San Francisco)	37c	0.19	0.446	0.06	0.141

present; the first having the least, the last the most.]

Tannin		Crude Fiber	Fat	Comments
Percent	Grains per cup	percent	percent	
12.2	3.75	4.9	20.9	
2.04	5.48	0.6	10.1	Asweetened, flavored, milk-cocoa· Stimulant properties (per cup) rated lowest of the brands tested, and very far below other brands.
11.9	5.53	3.32	21.72	
11.1	5.65	6.24	12.49	Arsenic—0.4 ppm. Lead —0.15 ppm. Crude fiber content, highest of brands tested.
10.1	5.78	3.8	23.2	
9.80	8.32	5.58	11.09	Arsenic—0.4 ppm. Lead —0.3 ppm. Crude fiber content, one of highest of brands tested.
11.8	8.56	4.1	24.3	
11.2	8.90	4.75	22.05	
11.5	9.30	4.87	23.98	Stimulant properties one of 3 highest of brands tested.
11.5	9.55	4.3	23.4	Stimulant properties rated highest of brands tested.
11.6	9.76	4.30	23.90	Stimulant properties one of 3 highest of brands tested.
3 2	7.51	1.0	18.8	

them are blends of various cocoas. Factors that the manufacturers take into consideration include color, flavor, appearance, and price. Aroma, sweetness, strength, astringency, and bitterness must be properly balanced in the final product. In addition, flavoring is added, such as vanilla or spices. In this country vanilla or the synthetic vanillin is preferred but foreign chocolate is often flavored with cinnamon, aniseed, or other spices. Standards of identity have been set by the federal government for cacao products, effective as of October 1, 1945, but they are of such a loose character as to be of little value to the consumer in determining quality. No doubt an effective method of distinguishing what American consumers consider to be high quality in cocoa and chocolate would be to subject the different products to the judgment of a panel of expert tasters such as the U.S. Tea Examiners of the Food and Drug Administration who examine and grade tea the year round. Another method might be to evaluate a cocoa product on the amount of high grades or varieties which it contained.

At the present time there is no information on the label of packages of cocoa about the

Notes for Table:

The figures given for tannin are a measure of the tannin-containing substances present in the cocoa, expressed as tannin (not the true percentage of tannin content after processing, as processing modifies the tannin substances present in the raw cacao beans).

In connection with manufacturers' directions for making cocoa with their products, teaspoonfuls and tablespoonfuls were assumed to be "level" unless otherwise stated. A "heaping teaspoonful" was assumed, for the purpose of calculating grains per cup, to be equal to two level teaspoonfuls.

blends, their original grades, or geographical sources. Currently effective government standards of identity merely classify cocoas as: High fat or breakfast cocoa, which contains not less than 22 percent cacao fat; medium fat cocoa, which contains 10 to 22 percent cacao fat; and low fat cocoa, which contains less than 10 percent cacao fat. Cocoa which is processed with an alkali such as ammonium carbonate or magnesium carbonate was formerly called "Dutch cocoa" or "Dutch Process" cocoa.

Under the new regulations, such cocoas must show on their label some phrase such as "Processed with Alkali" or "Processed with Ammonia." The "Dutching" process gives the finished product a darker color. It does not, as was originally thought, increase the solubility, but it has been shown that the processed cocoa forms a better suspension in liquid and has less tendency to settle to the bottom of the cup than the natural cocoa. Federal specifications also require the declaration on the label in specified fashion of any optional ingredient other than salt. The optional ingredients that may be included in cocoa are ground spice, ground vanilla beans, any natural food flavoring oil such as oleoresin, vanillin or other artificial food flavoring, butter, milk fat, dried malted cereal, ground coffee, ground nuts. Crude fiber from the husk of the cacao bean is limited to 1.75 percent by weight of cacao nibs from which the cocoa is made but the most recent standards of quality do not set a specific tolerance for this impurity in the finished product. The shell of the cacao bean is fibrous and relatively indigestible. It does not, according to one authority, add to the chocolate aroma and may even impart an off-odor. The quality of the finished product is, therefore, to some extent determined by the completeness of the removal of the husk.

THE stimulating effect of cocoa is due to the presence of the alkaloid drugs theobromine and caffeine. Like tea, it also contains tannic acid. Theobromine is somewhat similar to caffeine in structure and effect on the user. It has a mild stimulating effect on the muscular system. The drug theobromine is an effective diuretic and has replaced caffeine in the treatment of diseased kidneys because it has less of a tendency to produce wakefulness. On the effect of tannin in a common food or beverage, very little is to be found. In animal experiments, it has been found that the addition of tannin (diacetyltannin) to food delayed the passage of food residues and hence caused constipation. The White House Conference Report, Growth and Development of the Child, Volume III, pointed out that harmful effects were attributed to the tannic acid in tea, although there were few experimental data available.

Oxalic acid (which is naturally present in all cocoa) decreased utilization of calcium by the experimental animals, according to studies made by H. H. Mitchell, Ph. D., and Janice M. Smith, Ph. D., reported in the Journal of the American Medical Association, November 24, 1945. The data further showed that the low-priced cocoa used in the experiments which contained about 11 percent fat and appreciably more cacao shell (fiber content) depressed the growth of the test animals more than two moderate-priced cocoas with higher fat content (22 to 24 percent) and lower fiber content. (The difference was not accounted for by the difference in oxalic acid content of the several cocoas.) The experiments on test animals carried out in conjunction with a series of experiments on seven women students at the University of Illinois indicated that the human tolerance limit of cocoa was about one ounce daily, the equivalent (for a cocoa of 20 percent fat) of approximately 12 ounces of sweet chocolate. Headache, nausea, and impaired appetite resulted when larger amounts were consumed.

PARENTS who consider that coffee and tea are unsuitable beverages for children because of their stimulating effect should remember that essentially the same objection is to be applied to the use of cocoa. Children with a tendency to bed-wetting should not be given cocoa, particularly at their evening meal, because of its diuretic effect. Since cacao fat is not easily digested, it is wise to select low-fat (and low-fiber) cocoas rather than those with a high amount of fat. Cocoa and chocolate products are a frequent cause of allergic distress and will need to be avoided entirely by some people on that account.

There have been several studies of feeding experiments on test animals indicating that the addition of cocoa to milk lessened the nutritive value of the milk. The digestibility of the milk proteins appeared to be reduced, according to one study, and the destruction of vitamin C was hastened. In other experiments, it was found that the addition of cocoa interfered with proper utilization of cal-

cium and phosphorus in milk. On the other side, two Wisconsin researchers reported that cocoa in chocolate milk used in small amounts or about 1 percent was not likely to interfere with the proper utilization of the calcium and phosphorus in the milk.

FROM time to time during the war years CR has encountered complaints that the flavor or quality of cocoa available was inferior to that of pre-war days. In view of the fact that the sources of supply were largely cut off by submarine warfare and shortage of ships it may be that some important factor in the blend was missing. Samples were purchased of a number of well-known brands and submitted to a competent firm of consulting chemists to be checked for compliance with government standards of identity, including fat content and amount of crude fiber. For each brand, a cup of beverage was made according to the manufacturer's or distributor's directions and checked for the percentage amount of theobromine, caffeine, tannin present in each cup. Tests were also made of the lower-priced cocoas to determine amount of lead and arsenic present (if any).

In evaluating the various brands of cocoa, it should be kept in mind that the amount of caffeine in a cup of coffee is 1.5 to 2 grains per cup. The content of caffeine in tea may range from 1 to 1.5 grains per cup. The amount of tannin in tea has been estimated at 2 grains for the average cup. All of the brands of cocoa made according to the individual instructions on each box contained more tannin per cup than that usually found in a cup of tea and in a number of cases the amount was several times as great.

To obtain some comparison of the stimulating properties of cocoa with those of coffee and tea, it is in order to add the number of grains per cup of theobromine to that of caffeine shown in each case, keeping in mind that as a stimulant theobromine is considered to have somewhat less objectionable properties than caffeine. On this basis, only 3 brands, *Baker's Breakfast* Cocoa, *Our Mother's Pure All Occasion* Cocoa, and *Maillard's Breakfast* Cocoa, can be considered as approaching the coffee in stimulant properties and they had only about half the stimulating properties of tea. Until more is known, however, of the physiological effects of tannin on the digestive system, it is doubtful if one should assume that cocoa is a suitable beverage for very young children. In this connection it should be noted that Great Britain's minister of food in World War II, held that tea was not good for children and that no tea rations at all would be allowed for children under 5 years of age. In view of the high tannin content of cocoa, the same limitation might be suggested on the use of cocoa.

IN the light of present knowledge it would seem wise to regard cocoa and chocolate as flavoring substances to be used sparingly rather than as common items of daily diet. No *A*, *B*, or *C* ratings have been assigned to the different brands tested because of the present lack of experimental data on the effect of tannin on human health. The lead content of the cocoas checked on this point was below CR's tolerance for lead in chocolate of 0.6 parts per million. (This was found to be true also of chocolate in the tests reported in CR's BULLETIN for May, 1945, though some years ago contamination with lead was common in both chocolate and cocoa.)

Off the Editor's Chest

(*Continued from page 2*)

that most any desired result will be achieved if one just finds and pushes the right button.

Science is often capable of producing seeming miracles, sometimes by accident *and* shrewd and trained observation as in the case of penicillin, or, on the other hand, by dint of expenditure of the time of the country's ablest and most devoted investigators, supported by huge sums of money for intricate research equipment, and numerous individual technicians and other personnel, as in the case of the atom bomb. A world containing both the atom bomb and countless millions of people who do not understand something of the nature and limits of the world of the physical scientist is a world of decreased economic and social stability. One of the principal necessities imposed by atomic research is that a far greater number of men and women than in the past shall receive rigorous training in their secondary-school and college and post-graduate courses in the natural sciences, particularly in physics.

There is no likelihood that we shall achieve a push-button civilization. The limitations of that kind of a relationship with nature have been forcibly brought to people's attention in different sections of the country in the last decade when severe storms, winds, floods, or strikes of power-plant operatives have put public power systems out of commission. With electrical power shut off, many homes that had gone on for years

comfortably unaware of their dependence on outside forces and controls, found they had no lights, no refrigeration, perhaps no water supply (if their pumping systems depended upon an electrical power network), no hospital service (for light and power are the very life impulses of a hospital organization), no cooking facilities where electric range, toaster, and similar appliances were used, and worst perhaps of all, no heat in winter, in cases where an oil burner or stoker was used, dependent upon the operation of an electric motor and a number of electrical controls, for continuity of the fuel supply.

Many an engineer who, with customary engineering caution, had considered it wise not to have all household devices dependent upon one source of energy must have given thanks for his hand-fired coal furnace, which at least provided sufficient heat, and even make-shift means for cooking, during such an emergency.

Radio servicemen—in days when they were available—were flooded with demands at certain seasons of the year for correction of supposedly vital defects in a radio set which developed a disturbing garbling of speech or music and fading in and out of reception, because the set owners were unaware that the phenomenon was due to certain atmospheric conditions and not to a suddenly developed defect in the set. Manufacturers of a new television set are somewhat troubled by the fact that unless they use certain technically complex arrangements which will significantly increase the cost of the receiver, consumers may object to the fact that it is necessary to "warm up the set" by turning it on for several minutes before the program is to begin so that the image will be and remain clear and steady on the screen. Uninformed people, it appears, are likely to think that there is something wrong with a television set if it acts erratically at first and does not perform in a stable and satisfactory fashion the minute it is turned on, instead of realizing that this phenomenon and that referred to with respect to the radio receiver represent *practical limits of technological development* which cannot be passed at the present time—may, indeed, not be capable of being passed for a long time in the future.

The failure of many in responsible positions to appreciate the delicacy and detail involved in many technical inventions and appliances is illustrated by the instruction given boys in a certain manual training school in the making of portable electrical fixtures to be connected by flexible cord to existing house wiring; a state insurance rating and fire prevention bureau some years ago complained in an official release that the work was being taught in such a way that when the device was brought home, a qualified engineer would not dare permit it to be used, but would have to rewire it completely in order to make it reasonably safe. We have seen wholly misleading and potentially dangerous directions for splicing of electrical wires given in a teaching manual on home economics used by a state university which reached a wide audience of young people.

The point to be learned from all this is that the citizen must guard against the tendency to think that knowing a few new words about scientific matters gives him a grasp of the principles involved. Science and technological development are no more mastered by being "appreciated" than music is, and there are no simple solutions to the problem. Least of all does the proposal to centralize control of atomic weapons and research in one big government agency or under an Army bureau provide a "solution" to this or any other major social or economic problem. The right and only solution will be achieved through a more widespread knowledge of the principles used by chemists, physicists, and engineers in their work, and an appreciation by the layman that these sciences and skilled professions call for hard and rigorous training. Along with this must go a public understanding of the fact that the best practitioners of the real sciences, the sciences based upon observed facts and actual measurements ("meter readings") operate under a far higher sense of responsibility and care for precision and reliability than is expected of workers generally in business, the professions, or in public office.

It should be an important aim in teaching in the schools and colleges to develop an understanding of the *limitations of the human mind in reaching decisions on problems* except when the careful and rigorous methods of the exact sciences (physics, chemistry, mathematics) can be utilized. What is needed is less discussion of the social aims of the sciences and more training in their actual content and techniques. *Appreciation of the scientific method does not come from being told what a fine flowering of the human spirit it is, but rather from learning to work with it.*

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Contributions to CR Not Taxable

CONTRIBUTIONS made to Consumers' Research, Inc., for its work and studies carried out in the interest of ultimate consumers are deductible for income tax purposes.

The Treasury Department, Washington, D.C., in a letter advised us as follows, with respect to contributions made to Consumers' Research, Inc.:

> Contributions[1] to your organization by individual donors are deductible by such individuals in arriving at their taxable net income in the manner and to the extent provided by section 23 (o)[2] of the Revenue Act of 1938, or section 23 (o)[2] of Chapter 1 of the Internal Revenue Code.

Editor's Notes:
[1]Beyond the subscription price.
[2]Referring to the right of deduction from income of contributions to non-profit corporations, foundations, etc., organized and operated exclusively for certain purposes (including scientific and educational).

New Mending Materials for Repair of Open-Type Electric Stove and Appliance Elements

TWO new products have recently appeared on the market which are claimed by their manufacturers to be able to weld together by a simple process, broken heating-element wires of burned-out electrical appliances such as electric irons, toasters, coffee urns, open-type hot plates, etc. One of these is *Chanite* Electric Heating Element Flux in powder form, sold by Chanite Sales Co., 914 S. Main St., Fort Worth 4, Texas, at $1 for about 6 grams (about 1/5 oz.), or $75 a pound. Analysis showed it to consist of borax, iron, siliceous matter, and a deoxidant material such as carbon, the latter to prevent the formation of an oxide film on the metal during "welding." One publicity item for the product reported that the $1 package contained sufficient *Chanite* to mend 50 or more elements.

THE other product is *Nichrocite*, sold by the Advance Manufacturing Co., Box 861, Minneapolis, at $1 for 15½ grams (about ½ oz.); it was found to consist of sodium tetraborate fully hydrated (borax) mixed with a sufficient quantity of light mineral oil to form a paste, and a small amount of coloring matter.

AN attempt was made to judge the effectiveness of these products in the repair of broken heating elements by making actual repairs on the heating elements of toasters, electric irons, and coiled wire heaters. The method used was essentially the same in both cases, and followed the manufacturers' instructions. The broken ends of the elements to be repaired were twisted together and a quantity of the flux applied to the joints. The appliance was then connected to the power supply and the heating-element wire permitted to heat up. When *Nichrocite* was used on a toaster element, the paste at the joint began to swell, turned pink, and gave off a white smoke which persisted until a dry crust of pinkish ash remained. The residue that remained in the form of an ash in this case was the result of an attempt to make a repair on a toaster element drawing only a low current (about two amperes), insufficient to melt the ash. (The instructions with *Nichrocite* provided for this contingency and called for the application of external heat in such cases—which could be done by applying heat from a gas stove burner, Bunsen burner, or perhaps a gasoline torch.) When the temperature was raised sufficiently, by increasing the current flow through the toaster element to 3.5 amperes, the ash residue melted to a viscous fluid; this, upon cooling, was found to cover the joint with a brittle greenish glass-like substance. Application of additional heat was found unnecessary on appliances such as electric irons and heaters which generated sufficient heat to melt the repair material.

Chanite flux was found to behave in a way similar to *Nichrocite*, but because of its powdered form, it was harder to handle and apply, and there would be more waste in its use. *Chanite* has recently been marketed in a new form, as a lump of flux on the end of a stick. The price of this new product is about the same as for the powder in that sticks carrying about 2 grams of material are sold for 25c apiece, equivalent to somewhat less than 1/3 of an oz. for $1.

TENSILE strength tests on repaired elements showed that the compounds added no significant strength to the joints as against joints made in the heating-element wire by simply twisting their ends together, and the fluxes did not produce welds of the nichrome heating elements (though the advertising and publicity for both the materials claim they do). Apparently the fluxes work merely by surrounding the joint with a glassy envelope that helps prevent oxidation and deterioration of the joints through exposure to the air. For temporary repairs, it is considered that either product should be of value, though probably not capable of working satisfactorily with every type of heating element under all conditions met with in practice. Both the fluxes are made from inexpensive chemicals and so are extremely high priced, considering their intrinsic value. It is quite possible that common borax, much used as a welding and soldering flux, would do the work about as well as the two substances described, perhaps even better, for a limited trial of borax in the laboratory was favorable.

So-Called Rubber Preservative Coatings

SINCE tires still remain very scarce, and may for some months, even with rationing discontinued, the consumer has an interest in any commercial product asserted to preserve rubber articles from deterioration. One which was analyzed in 1944 is called *Flexoid Rubber Tire Preservative* (Sillers Paint and Varnish Company, Los Angeles; ½ pint, 50c); this was a thin, black liquid asserted to protect casing side-walls from the action of rain, sun, oil, and weather. Its composition is about one-quarter oxidized asphalt (much too low a proportion for a good product of this type) and three-quarters petroleum naphtha of low initial boiling point.

Protecto Rubber Preservative (Utility Products Company, New York City; 16-oz. jar, $1.09) was asserted to protect and prevent "rubber rot, hardening, cracking and oxidation of tires, sport clothes, raincoats, rubber mats and garden hose." Its composition is similar except that the oxidized asphalt content is much higher (44%), with the petroleum naphtha 56%. According to one authority, these figures correspond to proportions called for in a satisfactory product in this class.

The term rubber preservative is incorrect for both these substances. More appropriate would be the name "asphalt varnish" or "black paint for rubber." Such use as they have would be in protecting rubber from sunlight and exposure. The Bureau of Standards recommends that paint or other coatings should be applied to tires only when there is specific need for such treatment. For example, when an unused vehicle must be stored outdoors and exposed to the weather for a long period, coating of the tires with an asphalt varnish[1] or other inexpensive weather-resistant preparation is worth while. (Regular painting of tires is more necessary with tires having white side-walls, since white rubber tends to deteriorate more rapidly in sunlight than black.) Superficial checking of the side-walls is not serious, so long as deterioration does not become deep enough to endanger the cords. The Bureau of Standards says: "The large majority of tires, however, require no treatment beyond intelligent care and maintenance."

[1]Common names for which in the trade are black asphaltum, asphalt paint, and asphalt enamel.

★★★

Sy's-Plug (Sy's-Plug Co., New York City; 48c for 4½ oz.) is a cement-like material that is mixed with water, and then inserted with the fingers as a plastic plug into a hole in a plaster or masonry wall. The product is sold in house-furnishing and hardware stores. It is described on the package as constituting a plastic wall-plug in powder form that "holds screws, nails, hooks, instantly and permanently in masonry including soft plaster." The product, which would appear to have a number of uses that would appeal to the home handyman, was on analysis judged to be a mixture of a finely shredded paper well mixed with calcium sulfate (probably in the form of plaster of Paris); the mixture has a gray color which may be due to added carbon black or some similar substance. Tests of the product using wood screws in holes in wallboard and masonry showed the material to give the screws satisfactory holding power, and *Sy's-Plug* should be convenient in cases where there is a problem of obtaining a firm support for a screw or hook in a wall or ceiling indoors.

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† indicates that listings of names or brands are included.

Ratings of Motion Pictures

THIS section aims to give critical consumers a digest of opinion from a wide range of motion picture reviews, including the motion picture trade press, leading newspapers and magazines—some 19 different periodicals in all. The motion picture ratings which follow thus do not represent the judgment of a single person, but are based on an analysis of critics' reviews.

The sources of the reviews are:

Box Office, Chicago Daily Tribune, The Christian Century, Cue, Daily News (N.Y.), *The Exhibitor, Harrison's Reports, Mademoiselle, Motion Picture Herald, National Legion of Decency List, Newsweek, New York Herald Tribune, New York Times, Parents' Magazine, Release of the D.A.R. Preview Committee, Successful Farming, Time, Variety* (weekly), and *Unbiased Opinions of Current Motion Pictures* which includes reviews by the General Federation of Women's Clubs, the American Legion Auxiliary, National Film Music Council, and others.

The figures preceding the title of the picture indicate the number of critics who have been judged to rate the film A (recommended), B (intermediate), and C (not recommended).

Audience suitability is indicated by "A" for adults, "Y" for young people (14-18), and "C" for children, at the end of each line.

Descriptive abbreviations are as follows:

adv—adventure
biog—biography
c—in color (Technicolor or Cinecolor)
car—cartoon
com—comedy
cri—crime and capture of criminals
doc—documentary
dr—drama
fan—fantasy
hist—founded on historical incident
mel—melodrama
mus—musical
mys—mystery
nov—dramatization of a novel
rom—romance
soc—social-problem drama
trav—travelogue
war—dealing with the lives of people in wartime
wes—western

A	B	C		
—	6	8	**Abbott and Costello in Hollywood**	*mus-com AYC*
—	2	1	**Adventure**	*mel A*
—	1	2	**Adventure for Two**	*dr AYC*
—	3	7	**Adventures of Rusty**	*dr AYC*
—	12	5	**Affairs of Susan, The**	*com A*
—	1	8	**Allotment Wives**	*war-mel A*
1	11	4	**Along Came Jones**	*wes AYC*
—	3	—	**Along the Navajo Trail**	*mus-wes AYC*
7	9	—	**Anchors Aweigh**	*mus-com-c AYC*
1	12	2	**And Then There Were None**	*cri-mys A*
—	1	4	**Angel Comes to Brooklyn, An**	*mus-com A*
—	1	7	**Apology for Murder**	*cri-dr A*
1	2	1	**Appointment in Tokyo**	*war-doc AY*
—	5	2	**Arson Squad**	*cri-mel AYC*
—	11	4	**Back to Bataan**	*war-dr A*
—	3	1	**Bandits of the Badlands**	*wes A*
—	1	3	**Barge-Keeper's Daughter, The**	*com A*
1	5	1	**Battle for Music**	*mus-doc AYC*
—	4	7	**Beautiful Cheat, The**	*mus-com A*
—	5	8	**Bedside Manner**	*com A*
—	2	3	**Behind City Lights**	*dr A*
6	7	2	**Bell for Adano, A**	*war-dr A*
—	6	—	**Bells of Rosarita, The**	*mus-wes AYC*
7	6	1	**Bells of St. Mary's, The**	*dr AYC*
—	5	10	**Bewitched**	*dr A*
—	2	1	**Black Market Babies**	*mel A*
—	1	4	**Blazing the Western Trail**	*mus-wes AYC*
3	9	3	**Blithe Spirit**	*com-c A*
—	2	6	**Blonde from Brooklyn**	*mus-com A*
—	—	9	**Blonde Ransom**	*mus-com A*
1	12	3	**Blood on the Sun**	*war-mel A*
—	1	6	**Border Badmen**	*wes AYC*
—	2	6	**Boston Blackie's Rendezvous**	*mel A*
—	1	2	**Both Barrels Blazing**	*mus-wes AYC*
—	9	4	**Brighton Strangler, The**	*cri-mel A*
2	1	—	**Burma Victory**	*doc A*
6	9	4	**Captain Eddie**	*biog-dr AYC*
—	7	9	**Captain Kidd**	*mel AYC*
—	2	2	**Captain Tugboat Annie**	*mel AYC*
—	5	10	**Caribbean Mystery, The**	*mys-mel A*
—	—	5	**Castle of Crimes**	*mys-mel A*
—	7	5	**Cheaters, The**	*dr AYC*
—	4	4	**China's Little Devils**	*war-mel A*
—	7	8	**Christmas in Connecticut**	*com A*
—	2	4	**Club Havana**	*mus-mel A*
1	7	1	**Col. Effingham's Raid**	*dr A*
—	2	4	**Come Out Fighting**	*com AYC*
1	4	6	**Confidential Agent**	*war-mel A*
2	9	3	**Conflict**	*cri-mel A*
—	8	2	**Cornered**	*war-mel A*
—	2	1	**Corpus Christi Bandits**	*wes AYC*
—	—	3	**Crazy Knights**	*cri-mel AYC*
—	6	3	**Crime Doctor's Warning, The**	*mys-dr A*
—	4	4	**Crimson Canary, The**	*mus-dr A*
—	4	6	**Dakota**	*mel A*
—	4	4	**Daltons Ride Again, The**	*wes AYC*
—	3	8	**Danger Signal**	*mel A*
—	2	6	**Dangerous Intruder**	*cri-mys A*
—	8	7	**Dangerous Partners**	*mel A*
—	3	2	**Danny Boy**	*dr AYC*
—	3	2	**Detour**	*cri-mel A*
—	3	—	**Dick Tracy**	*mel A*
—	3	7	**Divorce**	*dr A*
—	2	1	**Doll Face**	*mus-com A*
—	10	6	**Dolly Sisters**	*mus-com-c A*
—	5	11	**Don Juan Quilligan**	*com A*
—	7	—	**Don't Fence Me In**	*mus-wes A*
1	14	4	**Duffy's Tavern**	*mus-com A*
—	4	6	**Easy to Look At**	*mus-com AYC*
—	7	3	**Enchanted Forest, The**	*fan-c AYC*
—	2	10	**Escape in the Desert**	*war-mel A*
—	4	8	**Falcon in San Francisco**	*cri-mys A*
1	2	6	**Fall of Berlin**	*war-doc A*
1	4	6	**Fallen Angel**	*mys-mel A*
—	—	5	**Fatal Witness, The**	*cri-mel A*
—	1	2	**Fighting Bill Carson**	*wes AYC*
—	4	5	**Fighting Guardsman, The**	*adv A*
—	7	8	**First Yank into Tokyo**	*war-dr A*
—	1	4	**Flame of the West**	*wes A*
—	—	3	**Flaming Bullets**	*mus-wes AYC*
—	6	5	**Follow That Woman**	*cri-mel A*
—	5	2	**Frontier Gal**	*mus-wes-c A*
—	3	8	**Frozen Ghost, The**	*mys-mel A*
—	5	5	**Game of Death, A**	*cri-mel A*
—	1	4	**Gangs of the Waterfront**	*cri-mel AYC*
—	1	2	**Gangster's Den**	*wes AYC*
—	5	4	**Gay Senorita, The**	*mus-com AYC*
—	6	10	**George White's Scandals**	*mus-com A*
—	5	2	**Getting Gertie's Garter**	*com A*
—	4	4	**Girl No. 217**	*war-dr A*
—	3	6	**Girl of the Limberlost**	*mel AYC*
—	1	4	**Girls of the Big House**	*cri-mel A*
—	9	5	**Great John L., The**	*mus-mel A*
1	9	6	**Guest Wife**	*com A*
—	2	3	**Half-Way House, The**	*fan A*
1	3	—	**Harvey Girls, The**	*wes-mus-com-c A*
1	4	12	**Her Highness and the Bellboy**	*rom AYC*
—	10	7	**Hidden Eye, The**	*cri-mys AYC*
—	—	3	**Hit the Hay**	*com AYC*
—	3	11	**Hold That Blonde**	*com A*
—	2	5	**Honeymoon Ahead**	*mus-com A*
—	—	3	**Hotel Reserve**	*war-mel A*
—	2	5	**House of Dracula**	*cri-mel A*
5	11	—	**House on 92nd St., The**	*war-mel AYC*
—	2	2	**How Do You Do?**	*mus-cri-com A*

A	B	C		
—	2	6	**I Love a Bandleader**	*mus-dr AYC*
—	4	5	**I'll Tell the World**	*mus-com AYC*
2	12	2	**Incendiary Blonde**	*mus-mel A*
1	5	6	**Isle of the Dead**	*mys-mel A*
—	3	—	**It Happened At the Inn**	*mel A*
—	5	9	**Jealousy**	*mys-mel A*
—	10	5	**Johnny Angel**	*mys-mel A*
—	5	2	**Johnny in the Clouds**	*war-dr A*
—	2	9	**Jungle Captive**	*mel A*
2	13	2	**Junior Miss**	*com AYC*
1	14	3	**Kiss and Tell**	*com A*
2	6	2	**Kitty**	*dr A*
—	4	9	**Lady on a Train**	*mys-com A*
2	10	1	**Last Chance, The**	*war-dr A*
—	3	3	**Last Hill, The**	*war-dr A*
—	3	2	**Lawless Empire**	*wes AYC*
—	2	3	**Leave Her to Heaven**	*dr-c A*
—	3	1	**Letter for Evie, A**	*war-com A*
—	2	3	**Life with Blondie**	*war-com A YC*
—	2	1	**Lone Texas Ranger, The**	*mus-wes AYC*
—	1	4	**Lost Trail, The**	*wes AYC*
3	9	3	**Lost Weekend, The**	*nov A*
—	1	9	**Love, Honor and Goodbye**	*com A*
2	12	4	**Love Letters**	*war-dr A*
—	2	4	**Love on the Dole**	*dr A*
—	3	8	**Mama Loves Papa**	*com A*
—	3	8	**Man Alive**	*com A*
—	8	—	**Man from Oklahoma**	*mus-wes AYC*
—	4	6	**Man in Grey, The**	*dr A*
—	7	1	**Marie-Louise**	*war-dr AYC*
—	1	2	**Marshal of Laredo**	*wes A*
—	5	6	**Masquerade in Mexico**	*mus-com A*
—	4	9	**Men in Her Diary**	*com A*
—	4	5	**Mexicana**	*mus-com A*
2	9	5	**Mildred Pierce**	*dr A*
—	2	3	**Military Secret**	*war-mel A*
—	3	2	**Miss Susie Slagle's**	*dr AYC*
—	1	6	**Missing Corpse, The**	*cri-com A*
—	3	2	**Muggs Rides Again**	*mel AYC*
—	10	3	**My Name is Julia Ross**	*cri-mys A*
—	6	9	**Naughty Nineties, The**	*mus-com AYC*
—	3	—	**Navajo Trail, The**	*wes AYC*
—	7	7	**Nob Hill**	*mus-dr-c A*
—	5	4	**On Stage Everybody**	*mus-com AYC*
—	3	6	**One Exciting Night**	*cri-com A*
—	1	2	**One Way to Love**	*com A*
2	13	—	**Our Vines Have Tender Grapes**	*dr AYC*
1	12	3	**Out of This World**	*mus-com A*
—	—	7	**Outlaws of the Rockies**	*mus-wes AYC*
—	11	4	**Over 21**	*com A*
1	7	2	**Pardon My Past**	*com A*
—	7	4	**Paris Underground**	*war-mel A*
—	1	9	**Penthouse Rhythm**	*mus-com A*
—	4	4	**People Are Funny**	*mus-com AYC*
—	2	4	**Pillow of Death**	*cri-mel A*
—	8	7	**Pillow to Post**	*war-com A*
—	3	1	**Portrait of Maria**	*dr A*
2	12	2	**Pride of the Marines**	*war-dr A*
—	1	5	**Prison Ship**	*war-mel A*
—	5	5	**Pursuit to Algiers**	*mus-mel AYC*
—	3	9	**Radio Stars on Parade**	*mus-com AYC*
—	—	3	**Red Dragon, The**	*mys-mel AYC*
—	2	1	**Return of the Durango Kid, The**	*mus-wes AYC*
8	4	5	**Rhapsody in Blue**	*mus-biog AYC*
—	—	5	**Rhythm Round-Up**	*mus-wes AYC*
—	2	8	**River Gang**	*mel A*
—	2	4	**Road to Alcatraz**	*cri-mys AYC*
—	5	1	**Road to Utopia**	*mus-com A*
—	—	5	**Rockin' in the Rockies**	*mus-wes AYC*
1	3	1	**Rough Riders of Cheyenne**	*wes AYC*
—	1	4	**Rustlers of the Badlands**	*mus-wes AYC*
—	—	—	**Rusty (See Adventures of)**	

A	B	C		
—	5	—	**San Antonio**	*mus-wes-c AYC*
—	3	1	**Sante Fe Saddlemates**	*wes AYC*
4	6	4	**Saratoga Trunk**	*mel A*
—	3	3	**Scotland Yard Investigator**	*mys A*
—	2	7	**Senorita from the West**	*mus-rom AYC*
—	—	5	**Sensation Hunters**	*mel A*
2	4	—	**Seventh Veil, The**	*dr A*
—	4	3	**Shadow of Terror**	*cri-mel A*
—	10	2	**Shady Lady**	*mus-dr A*
—	2	4	**Shanghai Cobra, The**	*cri-mys A*
—	5	3	**She Went to the Races**	*com A*
—	3	2	**She Wouldn't Say Yes**	*com A*
—	3	5	**Sing Your Way Home**	*mus-com A*
—	5	4	**Snafu**	*com A*
—	—	3	**Song of Old Wyoming**	*mus-wes-c AYC*
—	2	1	**Song of the Prairie**	*mus-wes AYC*
—	—	4	**South of the Rio Grande**	*mus-wes AYC*
1	7	5	**Southerner, The**	*soc-dr A*
—	11	5	**Spanish Main, The**	*adv-c A*
8	5	1	**Spellbound**	*dr A*
—	3	5	**Spider, The**	*mys-mel A*
—	1	2	**Springtime in Texas**	*mus-wes AYC*
—	—	4	**Stagecoach Outlaws**	*wes AYC*
4	12	1	**State Fair**	*mus-com-c AYC*
1	12	1	**Stork Club, The**	*mus-com A*
6	10	1	**Story of G. I. Joe**	*war-dr AYC*
—	—	—	**Strange Affair of Uncle Harry (See Uncle Harry)**	
—	2	7	**Strange Confession**	*cri-mys A*
—	1	3	**Strange Holiday**	*war-dr A*
—	2	1	**Strange Mr. Gregory, The**	*cri-mel A*
—	1	2	**Stranger from Santa Fe**	*wes AYC*
—	6	1	**Sunbonnet Sue**	*mus-dr AYC*
—	5	1	**Sunset in El Dorado**	*mus-wes AYC*
—	—	9	**Swing Out, Sister**	*mus-com A*
—	3	6	**Swingin' On a Rainbow**	*mus-com A*
—	2	6	**Tahiti Nights**	*mus-com A*
—	4	3	**Tell It to a Star**	*mus-com A*
—	2	8	**Ten Cents a Dance**	*mus-com A*
—	6	9	**That Night With You**	*mus-com A*
1	8	—	**That's the Spirit**	*mus-fan A*
5	6	1	**They Were Expendable**	*war-mel AYC*
1	7	6	**This Love of Ours**	*mel A*
1	12	1	**Thousand And One Nights, A**	*mus-fan-c AYC*
—	—	3	**Three in the Saddle**	*mus-wes AYC*
—	2	4	**Three's a Crowd**	*cri-mel A*
2	10	4	**Thrill of a Romance**	*mus-com-c A*
—	—	5	**Tiger Woman, The**	*mys-mel A*
—	2	3	**Tokyo Rose**	*war-mel A*
—	5	5	**Too Young to Know**	*dr A*
—	2	1	**Trail of Kit Carson**	*wes AYC*
—	—	3	**Trouble Chasers**	*com A*
7	5	—	**True Glory, The**	*war-doc A*
—	8	3	**Twice Blessed**	*com A*
—	11	6	**Uncle Harry**	*cri-mel A*
—	2	1	**Ural Front, The**	*war-dr A*
—	6	1	**Vacation from Marriage**	*war-com A*
—	3	3	**Voice of the Whistler, The**	*mys-mel A*
1	2	2	**Walk in the Sun, A**	*war-dr AYC*
—	5	4	**Wanderer of the Wasteland**	*wes AYC*
2	10	1	**Way Ahead, The**	*war-dr A*
—	2	3	**We Accuse**	*war-doc A*
2	10	5	**Weekend at the Waldorf**	*mus-com A*
1	8	2	**What Next, Corporal Hargrove**	*war-com AYC*
1	13	1	**Where Do We Go from Here?**	*mus-fan-c A*
—	1	7	**White Pongo**	*mel AYC*
—	3	5	**Why Girls Leave Home**	*mus-mel A*
—	2	2	**Wildfire**	*wes-c AYC*
—	4	6	**Within These Walls**	*soc-dr A*
—	9	4	**Woman in Green, The**	*mys-mel AYC*
—	2	1	**Woman Who Came Back, The**	*mel A*
3	12	1	**Wonder Man, The**	*mus-com-c A*
—	7	9	**Yolanda and the Thief**	*mus-com-c A*
—	11	4	**You Came Along**	*war-mus-dr AYC*
—	2	2	**You Can't Do Without Love**	*mus-mys AYC*
—	—	3	**Youth Aflame**	*dr A*
2	3	—	**Ziegfield Follies**	*mus-com-c A*

The Consumers' Observation Post

[Continued from page 4]

extremely active for a time so that they bound all over the place--a most undesirable occurrence in a bakery.

* * *

CLOTHING is extraordinarily scarce and, according to some trade authorities, it will be the fall of 1947 before the supply situation is back to anything like normal. In the meantime veterans are having a hard time acquiring a set of civilian clothes, although one reporter in Yank suggests that these difficulties are played up by what he calls "drum-beaters for the postwar Army." Many restrictions on production of men's clothing, however, have reduced its quality and what a man gets for his money. Vests are still unavailable for double-breasted suits, and two-pants suits are forbidden.

* * *

NEW PRODUCTS: Plaster-Stik, made by the Leonard Co., Des Moines, and selling in paint stores at 25c, is a nearly-white plaster patching material in convenient stick form, 3/4 inch in diameter and 5 inches long, weighing about 2 oz., for filling small cracks ("hairline cracks") and small holes in plaster, wood, etc. Analysis showed it to consist of about 10% synthetic wax, 30% of a drying oil such as soy bean oil, and 60% white pigment (titanium oxide-barium sulfate). The product was found to work very well on plaster, and was easy to apply. Being in ready-to-use form, it eliminated the messy preparing and mixing required for the regular plaster of Paris type of patching compounds.

One very high-priced radio receiver, which represents a surplus product either as sold by the military or by a manufacturer who had made them or bought them for incorporation in military equipment is being offered by a number of dealers. The receiver is identified as a Scott "Marine" radio, and is priced

New CR Book Coming

Latest Addition to CR's Book List

Special Edition - $1.50 to CR Subscribers

THIS book presents a history of man's meat-eating habits, with particular emphasis upon the food customs of the early settlers in the United States. It sets forth the important part which meat played in giving pioneer Americans the vigor, energy, and capacity for hard work and innovation they possessed. It shows the uniquely important properties of meat in prevention and cure of a number of disease conditions and demonstrates its fundamental superiority over the commoner, cheaper carbohydrate foods, such as cereals and vegetables.

PRACTICAL advice is given on how to select different cuts and grades of meat and how to cook them to realize the maximum food and flavor values. Although this new book is soundly based on the wealth of scientific data in CR's files, as well as considerable independent research by the authors, it is popularly written. In fact, there will be moments when the reader will want to lay the book down and rustle a hamburger or a roast beef sandwich.

THERE is a chapter on the fundamental character of protein as the most essential type of food for man, and another debunking the various superstitions and dietary propaganda that have led people to "cut down on meat." The book is of interest to every man—and woman—who has wanted to eat more meat but has been made to feel that it "was not good for him," for it shows how completely lacking in sound foundation such theories of diet have been.

Meat Three Times A Day

by

F. J. Schlink and M. C. Phillips

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Abundance of Meat: The American Heritage II

Why We Eat Less Meat Than Our Ancestors III

The Healing and Health Values of Meat IV

The Need for Protein V

Meat or Vegetables VI

Less Sugar and Starch for Better Health VII

Food and Forage for Animals — Meat for Consumers VIII

Where Meat is Beef IX

Meat on the Table: How to Buy and How to Cook It X

Better Eating for America XI

Ready About March 1st

Advance orders may be placed now. Please use the convenient blank on next page.

N. B. Please note that the special edition at the reduced rate is available only to CR subscribers, or with a new subscription.

at $197.50 including tax. It is said that there are only a limited number of these sets in the hands of stores. The receiver is not practical for the average consumer, on account of the small output (maximum undistorted volume level) and small speaker, and its high price. It is essentially a tuner (ac-dc, a disadvantageous type) equipped with a monitor loudspeaker, giving an electrical output of only one and one-half watts, which is about 1/6 the electrical output needed for really good loudspeaker reproduction in the home. The output and speaker are thus too small for general use where good tone quality is desired, unless for a hobbyist who is just interested in listening to short-wave and other transmissions ("DX"), or to news broadcasts and the like, without special interest in fine reproduction of music. (The receiver is not really well adapted for DX reception. A number of sets built especially for that purpose offer a much more logical choice for DX enthusiasts, e.g., Hallicrafter SX 23 A at $223, less speaker.)

To achieve good fidelity and sufficiently loud reproduction to make the set practical for general consumer use, would call for modification of some circuits in the receiver and the addition of a high-fidelity audio amplifier and the use as an accessory of a properly baffled loudspeaker of good size, such as the Jensen Reflex Speaker. (Installation of the necessary connections, etc., would have to be carried out by a well-qualified serviceman, and the job would be fairly expensive, and the circuit modifications referred to would call for exceptional skill and care.) If sufficient money were spent for this purpose, the user would have an exceptional broadcast receiver for receiving standard and short-wave broadcasts (but not FM) but the total price would be high, something like $300.

Peelers for root vegetables, potatoes, carrots, and for egg plant, and apples are making their appearance in numbers in five-and-dime stores and gadget shops. One called Famous Devault E.Z Peeler with a double-edge pivoted blade in a red plastic handle, manufactured by Johnson Products Co., Inc., Hollywood, sells for 25c. Another called Magic Wonder, made by McLean Kitchenware Distributing Co., Detroit 1, has a blade of the same shape but has only one instead of two sharpened edges. The blade part is set in a hollow metal handle and sells for 15c. The Magic Wonder with its single cutting edge is not so convenient to use as the Famous Devault E.Z Peeler, which is fairly satisfactory. Neither is quite so effective in performance as the Nee-Action Peeler-Shredder-Slicer, with a double-edge pivoted blade, made by the M. & M. Mfg. Co., Chicago, selling for 25c, which has been very widely sold in the five-and-dime stores. The last named was recommended in the April 1943 Observation Post and is still considered the best of the three peelers in design.

Consumers' Research, Inc.
Washington, N. J.

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PHONOGRAPH RECORDS

By Walter F. Grueninger

Please Note: Prices quoted do not include taxes. In the ratings AA indicates highly recommended; A, recommended; B, intermediate; C, not recommended.

VOCAL

Bach-Gounod: *Ave Maria* & **Scott:** *Think on Me.* Lily Pons (soprano). 2 sides, Columbia 17376. 75c. The sentimental *Think on Me* is the principal reason for considering the purchase of this disc—despite poor diction—for the familiar *Ave Maria* has been sung better. **Interpretation A**
Fidelity of Recording A

Bellini: *Norma—Mira, O Norma.* Zinka Milanov (soprano) Margaret Harshaw (contralto). 2 sides, Victor 11-8924. $1. Milanov is superb, Harshaw a good deal less impressive.
Interpretation A
Fidelity of Recording AA

Bizet: *Carmen—Chanson du Toréador* & **Rossini:** *Barber of Seville: Largo al Factotum.* Leonard Warren (baritone). 2 sides, Victor 11-8744. $1. Popular operatic arias which Warren sings robustly but never subtlely.
Interpretation B
Fidelity of Recording AA

Brahms: *Cradle Song* & **Reger:** *The Virgin's Slumber Song.* Blanche Thebom (mezzo-soprano). 2 sides, Victor 10-1173. 75c. A beautiful voice used skillfully but I much prefer these songs in their original language (German), and piano accompaniment, instead of in English with orchestral accompaniment, as here. Overall, better recordings of these songs are already catalogued. **Interpretation A**
Fidelity of Recording AA

Mozart: *Il Re Pastore—L'Amero Saro Costante.* Lily Pons (soprano). 2 sides, Columbia 71696. $1. A slow aria with treacly toned violin obbligato. Side two is recorded at a higher volume level than side one. **Interpretation A**
Fidelity of Recording A

Rimsky-Korsakoff: *Le Coq d'Or—Hymn to the Sun* & **Thomas:** *Mignon: Je Suis Titania.* Patrice Munsel (soprano). 2 sides, Victor 11-8886. $1. This young Metropolitan Opera star's performance of two brilliant arias reveals some vocal weaknesses. For a better performance, try Lily Pons on Victor 17232. **Interpretation B**
Fidelity of Recording AA

Schubert: *Die Winterreise*—6 Songs. Lotte Lehmann (soprano). 6 sides, Columbia Set 587. $2.75. Part of a famous cycle performed here by a distinguished singer of lieder. Companion to Columbia Set 466 which contains 7 more of the 24 songs in the cycle. **Interpretation AA**
Fidelity of Recording AA

Tchaikovsky: *None But the Lonely Heart* & *Prayer: Lord Almighty God.* Gladys Swarthout (mezzo-soprano). 2 sides, Victor 10-1166. 75c. A disappointment, for Miss Swarthout uses her rich voice with little feeling. My pressing sounds blurred, without sibilants. **Interpretation B**
Fidelity of Recording C

Verdi: *La Forza del Destino-Pace, Pace* & **Mascagni:** *Cavalleria Rusticana—Voi Lo Sapete.* Zinka Milanov (soprano). 2 sides, Victor 11-8927. $1. Great arias recorded down the years by stars. Miss Milanov's performance lies near the best. **Interpretation AA**
Fidelity of Recording AA

Verdi: *Rigoletto—Parmi Veder Le Lagrime* & *La Traviata-De'Miei Bollenti Spiriti.* Jan Peerce (tenor). 2 sides, Victor 11-8926. $1. Less familiar recitatives and arias sung with no subtlety but with plenty of "sock." **Interpretation B**
Fidelity of Recording AA

Wagner: *Tannhauser—Song to the Evening Star* & *Wolfram's Entry.* Herbert Janssen (baritone). 2 sides, Columbia 71697. $1. The melodious *Evening Star* is the attraction. Janssen has a fine sense of style but his voice lacks the lustre found in several competitive recordings. **Interpretation A**
Fidelity of Recording AA

Wagner: *Die Walkure*—Act III. Helen Traubel (soprano), Herbert Janssen (baritone), with the Philharmonic-Symphony Orchestra of New York under Rodzinski. 16 sides, Columbia Set 581. $8.50. In its entirety, the last act of *Die Walkure.* Famous scenes included—"Ride of the Valkyries," "Wotan's Farewell" and the "Magic Fire Music" taking about four of the sixteen sides. Though some of her high notes pierce, Traubel is magnificent. Janssen's voice lacks sheen but possesses dramatic quality and style. The orchestra is excellent. Recording fails somewhat in clarity of detail.
Interpretation A
Fidelity of Recording A

James Melton in Operatic Arias. Melton (tenor). 6 sides, Victor Set 1013. $3.50. Established favorites from "Don Giovanni," "Die Zauberflote," "Lohengrin," "Die Meistersinger," "Manon." Melton comes off best in the French numbers. **Interpretation B**
Fidelity of Recording AA

A Lawrence Tibbett Program. Tibbett (baritone). 8 sides, Victor Set 1015. $4.50. All of the performances in this set, which present Tibbett at his peak, have been available for years. Neither recording of voice nor orchestra matches the clarity and depth of today's standards. Included are "I Got Plenty of Nuttin'," "Goin' Home," "On the Road to Mandalay," and five operatic arias. **Interpretation A**
Fidelity of Recording B

LIGHT, FOLK, AND MISCELLANEOUS

Chopin-Kaper-Latouche: *Polonaise.* Al Goodman and His Orchestra and Singers. 8 sides, Victor Set P-145. $2.50. New York play critics found little to praise in the show *Polonaise* from which these Chopin adaptations are taken. I second the motion, so far as the music is concerned. The performers complete their task satisfactorily, the recording of the orchestra is full bodied, whereas on occasion that of the voice bears an unnatural edge. **Interpretation AA**
Fidelity of Recording B

Mercer-Warren: *The Harvey Girls.* Judy Garland, Kenny Baker, Virginia O'Brien (singers). 6 sides, Decca Set 388. $2.75. "On the Atchison, Topeka and the Santa Fe"; "Wait and See"; "The Wild, Wild West" and other numbers from the motion picture. **Interpretation A**
Fidelity of Recording AA

Ballads. George Edwards, Richard Dyer-Bennet, Josh White, Eithne Golden, Aino Karelia, Adolf Stark (folksingers). 6 sides, Asch Set 560. $5. The performances on only one disc are worthy of repeated hearing. Pay $1.50 for Josh White singing the spiritual "Well, Well, Well" and, overside, Richard Dyer-Bennet singing the American ballad, "Spanish is the Loving Tongue." **Interpretation B**
Fidelity of Recording A

Jelly Roll Morton (pianist). 4 sides, Decca Album 1018. $2. The fabulous jazz performer recorded these numbers in 1926. The fidelity is surprising considering the date. Included are "King Porter Stomp," "The Pearls," "Sweetheart O' Mine," "Fat Meat and Greens." **Interpretation AA**
Fidelity of Recording B